

FORT BRAGG NORTH CAROLINA

US Army Corps of Engineers Savannah District

Solicitation Number
DACA21-02-R-0047
16TH MILITARY POLICE BRIGADE BARRACKS COMPLEX
FY-03, Line Item 41631
Volume II of II – Appendices E through L of Section 01010
and Sections 01012 through 13280
January 2003

PHASE TWO OF TWO PHASE DESIGN/BUILD SUBMITTAL PROCEDURE

THIS SOLICITATION IS UNRESTRICTED PURSUANT TO THE "BUSINESS OPPORTUNITY DEVELOPMENT REFORM ACT OF 1988" (PUBLIC LAW 100-656)

U.S. ARMY ENGINEER DISTRICT, SAVANNAH CORPS OF ENGINEERS 100 WEST OGLETHORPE AVENUE SAVANNAH, GEORGIA 31401-3640



U.S. Army Corps of Engineers Savannah District

> U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

BUILDING NUMBER 5316 FORT BRAGG, NORTH CAROLINA

*4

DELETED

(This building has been demolished)



(Revised by Amendment No. 0004)



U.S. Army Corps of Engineers Savannah District

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

INCLUDING ASBESTOS

BUILDING 5420 FORT BRAGG, NORTH CAROLINA



HAZARDOUS BUILDING MATERIAL REPORT Ft. BRAGG, NORTH CAROLINA BUILDING 5420

INTRODUCTION

- 1. This report documents the hazardous building material survey of Building 5420 associated with the 16th MP Brigade complex project at Ft. Bragg, North Carolina conducted on 13 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.
- 2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials. Two asbestos samples were taken from the roof for analysis and results are included in this report.
- 3. Building 5420 was built in 1984 and is of concrete masonry block construction with a concrete floor slab and a wood decked and shingled roof. No physical sampling of suspect hazardous components was performed, other than the two suspect asbestos samples, and only a visual counting was performed.
- 4. The asbestos bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). The sample was analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is included in Appendix 1 and their NVLAP accreditation is in the Certifications section.

SUMMARY

- 5. The florescent and metal halide light count results are presented in Table 1.
- 6. No lead building components were located in Building 5420.
- 7. No mercury-containing equipment was located in Building 5420.
- 8. Two samples were taken from the roof for asbestos analysis and found to be non-asbestos containing. One sample was the shingles and the other was the felt paper under the shingles. No other suspect asbestos-containing materials were located. The sampling location is indicated on the Floor Plan, which follows.

Prepared by:		
	TIMOTHY A. JONES	

Tables

TABLE 1 BUILDING 5420 FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	1	4 foot long, 1 bulb florescent fixtures

Floor Plan (See file 5420FloorPlan.dgn)

Appendix 1

abbreviations: Chr. = chrysotile Am. = amosite Cro. = crocidolite An. = anthophyllite T/A = tremolite/act	Comment: No Asbestos Detected.	5420-R-2	Client#	Comment: No Asbestos Detected.	5420-R-1	Client#	Sample ID	Hygeia Project Number: A0203005 Client Project Number/Name: 7451 / Fort Bragg - Building 5420	Hygeia Lal 1300 William Marietta (770)
eviations: = chrysotile = amosite = crocidolite = anthophyllite = tremolite/actinolite	bestos Detected.	A0203005-02	Hygeia#	bestos Detected	A0203005-01	Hygeia #		umber: A0203(mber/Name: 7	Hygeia Laboratories Inc. 1300 Williams Drive, Suite A Marietta, GA 30066 (770) 514-6933
	W SE	Black	Color		Black	Color	Sample)05 451 / Fo	>
cell glass syn sty det		Fibrous	Texture		Fibrous No	Texture	Sample Description	rt Bragg	
cell = cellulose glass = fibrous glass syn = synthetic sty = styrene foam det = detected		8	Homog.		So	Homog.	tion	- Building 54	
glass S			P			Chr.		420	
per ver MF			B			Am.	Asbest		PLM A
per = perlite ver = vermiculite MF = Mineral filler B/F = Binder / filler NAD = No asbestos detected			18			Cro.	Asbestos Percent		PLM Analysis Summary
ulite I filler / filler			 			A	2		ummary
ected			MI.			T/A			
OF ONF Cons		70%	<u> </u>			Cell.	Othe		
OF = Other Fibers ONF = Other Non-Fit Cons = Consolidated			Glass		20%	Glass	Other Fibers	Analyz	
= Other Fibers = Other Non-Fibers = Consolidated	Part Control		IQ.			유		Page: 1 of 1 zed: 3/18/20	
s Fibers		30%	B/F		80%	PF.	Non -	Page: 1 of 1 Analyzed: 3/18/2002 by JC	
			ONF			ONF	Non - Fibers	Ċ	

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	Ft. Bragg Bldg. 5420	EMU Job No.: 7451
Samplers:	Tim Jones, Jack Ford	Analysis: PLM

			T
DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/13/02	5420-R-1	43400	Roof Shingle
3/13/02	5420-R-2	43401	Roof Felt
			/
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			·
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			·
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Relinquished By	Date	Time	Received By	Date	Time
Tim Son	3-18-02	1805	Malan	3-18-02	12:55

6	comments:				
1					

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA / AHERA (TSCA Title II) Approved Accreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997

2360 Certificate Number

February 12, 1997
Examination Date

February 11, 1998

William H. Spain - Course Dijector

Rachel G. McCain - Exam Administrator

Giran Control of the Control of the

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

1 April 2002 CESAS-EN-GGe

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation and NESHAP Regulations Training

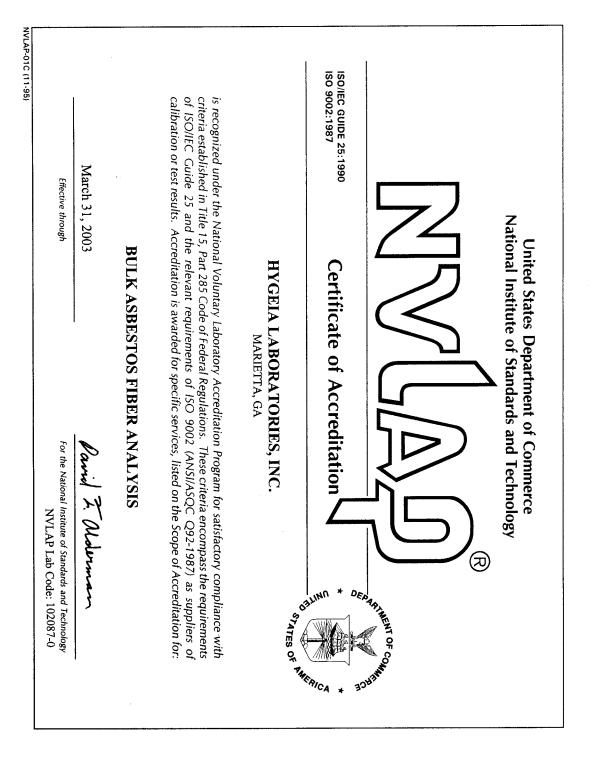
Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

February 26, 2002
Examination Date

February 25, 2003

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600





National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990 ISO 9002:1987

Scope of Accreditation

Page: 1 of 1 NVLAP LAB CODE 102087-0

BULK ASBESTOS FIBER ANALYSIS

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A Marietta, GA 30066-6299 Mr. Clayton Call

Phone: 770-514-6933 Fax: 770-514-6966 E-Mail: call67@atc-enviro.com

NVLAP Code

Designation

18/A01

EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk

Insulation Samples

March 31, 2003

Effective through

Pavid L. Molerman

For the National Institute of Standards and Technology

NVLAP-01S (11-95)



U.S. Army Corps of Engineers Savannah District

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

ASBESTOS SURVEY

BUILDING NO. 5517 FORT BRAGG, NORTH CAROLINA



ASBESTOS INSPECTION REPORT FORT BRAGG, NORTH CAROLINA BUILDING NUMBER 5517

INTRODUCTION

- 1. This report documents the asbestos inspection and survey of Building No. 5517 at Fort Bragg, North Carolina conducted on March 12 to 14, 2002 by USACE Savannah District employees Tim Jones and Jack Ford. The survey was conducted in general accordance with the regulatory guidelines in the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763 Subpart E Sections 763.80-763.88) and "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Purple Book) (EPA publication number 560/5-85-024). Although not required by the AHERA guidelines, roof and other exterior miscellaneous materials were also inspected and sampled.
- 2. Building No. 5517 was built in 1941 and is a single story structure of wood frame construction with aluminum siding and soffit covering the old wood exterior. The floor is concrete slab on grade and the roof is wood frame with asphalt shingles. Building 5517 originally housed the post bakery, but has been renovated many times and now contains offices and storage areas.
- 3. All accessible areas of Building No. 5517 were visually inspected for suspected Asbestos Containing Materials (ACM) by an accredited inspector. Bulk samples of all suspected ACM's were collected. Samples were taken from inconspicuous locations when possible. This report details ACM as identified at the time of inspection only.
- 4. The bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). The samples were analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is included in Appendix 1 and their NVLAP accreditation is in the Certifications section.
- 5. In compliance with the AHERA regulations, material is considered an Asbestos Containing Material when it contains greater than 1 (one) percent asbestos. Likewise, in this report, any material containing concentrations greater than 1 percent asbestos will be considered "positive". A narrative discussion of the AHERA ACM types (i.e., thermal systems insulation, miscellaneous and surfacing materials) found in Building No. 5517 is included in this report when relevant. Bulk sample information appears on Table 1. Estimated quantities of individual asbestos containing materials appear on Table 2. Material

characterization of samples identified as asbestos containing appears as Table 3. Photographs of the positive materials, when available, appear as Figures. The specific location where each bulk sample was obtained is shown on the building floor plans, which appear as Plates. Positive ACM samples are highlighted on the floor plan Plates and, where possible, locations of similar positive ACM are identified. It is reasonable to assume that all materials similar to those testing positive, also contain positive amounts of asbestos and should be treated as such.

DISCUSSION

6. **Thermal Systems Insulation (TSI)** – TSI is insulation material applied to pipes, fittings, boilers, tanks, ducts, or to other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes (Refer to Tables 1-3 and Plate 1 for specific information and sample locations).

TSI throughout building 5517 is fiberglass with the exception of one remnant on a section of steam piping at a unit heater in the ceiling of an office at the southwest end of the building. See plate #1, sample 58PR for specific location.

7. **Miscellaneous Materials** – Miscellaneous materials include building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and do not include surfacing or TSI.

In the past, there were a great number of miscellaneous building materials that had asbestos fibers added to them during the manufacturing process to increase durability and fireproofing qualities. The following suspect miscellaneous materials were sampled at Building No. 5517 and found to contain asbestos.

<u>Floor Materials</u> – (Refer to Tables 1-3 and Plates 2 & 5 for specific information and sample locations).

Twenty samples of floor covering were analyzed. Of those eight were determined to be asbestos containing. The positive materials are as follows; gray and tan sheet vinyl floor covering, green floor tile (lower layer), 12" X 12" white with black accents floor tile, 12" X 12" black with white accents floor tile, 12" X 12" white with gray accents floor tile and 12" X 12" gray with brown accents floor tile.

<u>Roofing Materials</u> – (Refer to Tables 1-3 and Plate 4 for specific information and sample locations).

Troweled on roofing cement used as patching and flashing material was found to contain positive amounts of asbestos.

<u>Caulking Materials</u> - (Refer to Tables 1-3 and Plate 3 for specific information and sample locations).

Caulking material between the brick chimney and siding was found to be asbestos containing.

<u>Asbestos Cement Board</u> - (Refer to Tables 1-3 and Plates 2, 6 & 7 for specific information and sample locations).

Asbestos cement board is used as wall covering in the small shop room east of the warehouse area and as ceiling material above the suspended ceiling in the storage room next to the shop.

<u>Ceiling Tiles</u> - (Refer to Tables 1-3 and Plates 2 & 6 for specific information and sample locations).

Pink colored 2' X 2' foil backed suspended ceiling tiles in the conference room contains positive amounts of asbestos. Spare tile may be found in the small closed in the conference room.

8. **Surfacing** – Surfacing material is friable material that is sprayed on, troweled on, or otherwise applied to surfaces for decorative or other purposes.

No samples of surfacing material were found to be asbestos containing.

Summary

9. In summary, the following materials in building 5517 were found to contain or are assumed to contain asbestos:

Floor tiles in many areas of the building contain asbestos (see floor plan plates).

Troweled on roofing cement used for flashing and patching contains positive amounts of asbestos.

Caulking material at the junction of siding and masonry brick chimney contains asbestos. This material may be found at other areas under newer aluminum siding.

Asbestos cement board used as wall and ceiling covering in two rooms contains asbestos.

Pink colored 2' X 2' foil backed ceiling tile in one room contains positive amounts of asbestos.

TSI pipe run insulation remnant at one steam unit heater contains asbestos.

CESAS-EN-GGe	22 March 2002

Prepared by: ______TIMOTHY A. JONES

Tables

Table 1 Suspect ACM Samples
 Table 2 ACM Quantity Summary
 Table 3 Material Characterization and Assessment

5517-R-2 5517-R-3 5517-R-4 5517-R-5	DESCRIPTION Roof shingle, single layer roof Roofing felt Rolled roofing, poor condition Roofing felt	Roof field Roof field, under sample 5517-R-1 Roof field, lower roof on east end of building Roof field, under sample 5517-R-3 At junction of lower roof and	ASBESTOS TYPE(%) None None None
5517-R-1 5517-R-2 5517-R-3 5517-R-4	Roof shingle, single layer roof Roofing felt Rolled roofing, poor condition	Roof field Roof field, under sample 5517-R-1 Roof field, lower roof on east end of building Roof field, under sample 5517-R-3	None None
5517-R-2 5517-R-3 5517-R-4	Roofing felt Rolled roofing, poor condition	Roof field, under sample 5517-R-1 Roof field, lower roof on east end of building Roof field, under sample 5517-R-3	None None
5517-R-3 5517-R-4	Rolled roofing, poor condition	5517-R-1 Roof field, lower roof on east end of building Roof field, under sample 5517-R-3	None
5517-R-3 5517-R-4	Rolled roofing, poor condition	Roof field, lower roof on east end of building Roof field, under sample 5517-R-3	None
5517-R-4		of building Roof field, under sample 5517-R-3	
5517-R-4		Roof field, under sample 5517-R-3	
	Roofing felt	5517-R-3	None
	Roofing felt		INone
5517-R-5		I At junction of lower roof and	
5517-R-5		_	
5517-R-5		wall section at east end of	
	Roof patching cement	building	10% chrysotile
	Rolled roofing, good condition,	Roof field, lower roof on east end	
5517-R-6	appears to be a patch section	of building	None
		Roof field, lower roof on east end	
		of building, under sample	
5517-R-7	Roofing felt	5517-R-6	None
		Around plumbing vent pipe lead	
		flashing at roof at lower roof on	
5517-R-8	Roof patching cement	east end of building	8% chrysotile
		On metal square vents through	
5517-R-9	Roof patching cement	roof at joint with roof field	14EO/ abmiaatila
5517-R-10			15% chrysotile
	Roof patching cement	At flashings at brick chimneys	5% chrysotile
5517-R-11	Roof patching cement Rolled roofing, new looking	At flashings at brick chimneys On boiler room roof by chimney	
	i i i i i i i i i i i i i i i i i i i	On boiler room roof by chimney On boiler room roof by chimney	5% chrysotile None
	i i i i i i i i i i i i i i i i i i i	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11	5% chrysotile
5517-R-11	Rolled roofing, new looking	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through	5% chrysotile None
5517-R-11 5517-R-12	Rolled roofing, new looking	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer	5% chrysotile None None
5517-R-11	Rolled roofing, new looking	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking	5% chrysotile None
5517-R-11 5517-R-12 5517-R-13	Rolled roofing, new looking Roofing felt Roof patching cement	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east	5% chrysotile None None
5517-R-11 5517-R-12	Rolled roofing, new looking Roofing felt	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building	5% chrysotile None None
5517-R-11 5517-R-12 5517-R-13	Rolled roofing, new looking Roofing felt Roof patching cement	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east	5% chrysotile None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample	5% chrysotile None None None None
5517-R-11 5517-R-12 5517-R-13	Rolled roofing, new looking Roofing felt Roof patching cement	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14	5% chrysotile None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east	5% chrysotile None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample	5% chrysotile None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15	5% chrysotile None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15 Lower roof section on south east	5% chrysotile None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14 5517-R-15	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt Roof shingle or rolled roofing	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15 Lower roof section on south east section of building, under sample	5% chrysotile None None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt Roof shingle or rolled roofing Built up roof membrane	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15 Lower roof section on south east	5% chrysotile None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14 5517-R-15 5517-R-16	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt Roof shingle or rolled roofing Built up roof membrane Roof patching cement, silver	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15 Lower roof section on south east section of building, under sample 5517-R-16	5% chrysotile None None None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14 5517-R-16 5517-R-16	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt Roof shingle or rolled roofing Built up roof membrane Roof patching cement, silver coated	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15 Lower roof section on south east section of building, under sample 5517-R-16 At flashings at brick chimneys	5% chrysotile None None None None None None 10% chrysotile
5517-R-11 5517-R-12 5517-R-13 5517-R-14 5517-R-15 5517-R-16	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt Roof shingle or rolled roofing Built up roof membrane Roof patching cement, silver	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15 Lower roof section on south east section of building, under sample 5517-R-16	5% chrysotile None None None None None None
5517-R-11 5517-R-12 5517-R-13 5517-R-14 5517-R-16 5517-R-16	Rolled roofing, new looking Roofing felt Roof patching cement Roof shingle, upper layer roof Roofing felt Roof shingle or rolled roofing Built up roof membrane Roof patching cement, silver coated	At flashings at brick chimneys On boiler room roof by chimney On boiler room roof by chimney, under sample 5517-R-11 On metal square vents through roof at joint with roof field, newer looking Lower roof section on south east section of building Lower roof section on south east section of building, under sample 5517-R-14 Lower roof section on south east section of building, under sample 5517-R-15 Lower roof section on south east section of building, under sample 5517-R-16 At flashings at brick chimneys	5% chrysotile None None None None None None 10% chrysotile
	i i i i i i i i i i i i i i i i i i i	At flashings at brick chimneys	5% chrysotile

	,	_	
		Main roof field, under sample	
5517-R-20	Roofing felt	5517-R-19	None
5517-R-21	Rolled roofing	Vertical siding on dormer	None
5517-R-22	Felt	Under vertical siding on dormer	None
		Lower roof section on south east	
		section of building, under shingle	
5517-R-23	Built up roof membrane	roof	None
		Exterior of window frame at north	
		end of building, around newer	
5517-E-24	Window frame caulking material	looking aluminum window	None
		On window panes of old windows	
5517 F 05	Mindow slowing compound	in storage shed lean to at north	Nama
5517-E-25	Window glazing compound	end of building Attached to wood framing studs	None
		under old wood clap board siding,	
5517-E-26	Felt paper	mechanical room	None
5517-L-20	Gypsum board wall covering	Mechanical room walls	None
33 I 7 - IVI - Z 7	Gypsum board wan covering	Mechanical room walls, around	None
5517-M-28	Gypsum board wall covering	boiler vent through wall	None
3317-101-20	Gypsum board wan covering	At junction of brick chimney	None
5517-E-29	Caulking material	and siding	10% chrysotile
0017 2 20	Cellulose composite board wall	and siding	10 /0 GIII y GGCIIC
5517-1-30	covering	Warehouse area	None
	Asbestos cement board wall		
5517-1-31	covering	Walls of shop room	60% chrysotile
	Cellulose composite board wall		_
5517-1-32	covering	Warehouse area	None
	Cellulose composite board wall		
5517-1-33	covering	Store room	None
5517-1-34	Grey and tan sheet vinyl flooring	Store room	20% chrysotile
5547 4 05	Clath, duct to a		Nama
5517-1-35	Cloth duct tape	Unit heater in ceiling of store room	None
5517-1-36	12" X 12" tan with brown accents floor tile	Store room above becoment	None
3317-1-30	Asbestos cement board ceiling	Store room above basement Store room, above suspended	None
5517-1-37	covering	ceiling	60% chrysotile
3011 1 01			00 /0 0 m y 00 m o
5517-1-38	Gypsum board wall covering	Store room, under wood paneling	None
5517-1-39	2' X 2' random pattern ceiling tile	Store room suspended ceiling	None
		Applied to wood framing around	21.4
		metal vents through roof in	
5517-1-40	Heat shield material	warehouse area	None
			ASBESTOS
FIELD ID	DESCRIPTION	LOCATION	TYPE(%)
	-	Applied to wood framing around	(/
		metal vents through roof in	
5517-1-41	Heat shield material	warehouse area	None

		Upper layer, office area by	
5517-1-42	12" X 12" black floor tile	warehouse	None
3317-1-42	12 X 12 black floor tile	Lower layer, office area by	None
		warehouse, under sample 5517-	
5517-1-43	Brown floor covering	1-42	None
3317-1-43	Brown floor covering	1-42	None
			<1% chrysotile in
	12" X 12" black with white accents		mastic only, tile
5517-1-44	floor tile	Office area by warehouse	NAD
	12" X 12" tan with gray accents floor		
5517-1-45	tile	warehouse	None
		Women's restroom near	Tile 4%
		warehouse, under sample 5517-	chrysotile,
5517-1-46	Green floor tile	1-45	mastic NAD
	2' X 4' random pattern suspended	Women's restroom near	
5517-1-47	ceiling tile	warehouse	None
		On drywall under wood paneling in	
5517-1-48	Textured surfacing material	offices near warehouse area	None
	2' X 4' random pattern suspended		
5517-1-49	ceiling tile	Office area near warehouse	None
3317-1-43			TVOTIC
	12" X 12" brown with tan accents	Men's restroom near warehouse	
5517-1-50	floor tile	area	None
	2' X 4' random pattern suspended	Men's restroom near warehouse	
5517-1-51	ceiling tile	area	None
		Under plywood and brown with tan	
		floor tile in men's restroom near	Tile NAD, mastic
5517-1-52	Black floor tile	warehouse	<i% chrysotile<="" td=""></i%>
			Tile 2%
	12" X 12" white with black	Front entry area on west side of	
5517-1-53	accents floor tile	building	mastic NAD
			Tile 2%
	12" X 12" black with white accents	Front entry area on west side of	chrysotile,
5517-1-54	floor tile	building	mastic NAD
		Interior side of exterior wall, west	
	Textured wall surfacing material,	side of building under wood	
5517-1-55	green painted	paneling, near entry door.	None
FE47 4 50	12" X 12" white with gray accents		20/ abm = -4!!-
5517-1-56	floor tile	Procurement Chief's office	2% chrysotile
			ASBESTOS
FIELD ID	DESCRIPTION	LOCATION	TYPE(%)
	2' X 4' random pattern suspended	Corridor, Typical for most of	
5517-1-57	ceiling tile	building	None
		Office ceiling on steam pipe at	
5517-1-58PR	TSI pipe run remnant	unit south west end of building	60% chrysotile
	Surfacing material on underside of		
5517-1-59	stainless steel kitchen sink	Break room	None

	1		ı
	4011 V 4011 to a with brown a count		
5517-1-60	12" X 12" tan with brown accents floor tile	Patching tiles in break room and corridor at entry to break room	None
3317-1-60	lioor tile	corndor at entry to break room	None
			Overall <1%
			chrysotile, Tile
	12" X 12" gray with brown		NAD, mastic
5517-1-61	accents floor tile and mastic	Restrooms at break room	7% chrysotile
	12" X 12" tan with brown accents	Corridor in front of Tech Services	•
5517-1-62	floor tile	conference room	None
		Corridor in front of Tech Services	
5517-1-63	12" X 12" black floor tile	conference room	None
		Maintenance Tech Services	
5517-1-64	12" X 12" black floor tile	Chief's office, under carpet	None
EE47.4.6E	Green, cloth backed sheet vinyl	Tech Services Operations and	Nama
5517-1-65	flooring	Planning office	None
5517-1-66	Gypsum board ceiling	Corridor, above suspended ceiling	None
0017 1 00	Gypsum board wall covering with	Corridor, above suspended ceiling	TTOTIC
	sand texture surfacing, green		
5517-1-67	painted	Corridor, at north east entry door	None
	2' X 2' foil backed pink random	-	
5517-1-68	pattern suspended ceiling tile	Conference room	3% chrysotile
	12" X 12" black with white	Office, at north west end of	
5517-1-69	12" X 12" black with white accents floor tile	building	3% chrysotile
	accents floor tile	building Office, at north east end of	-
5517-1-69 5517-1-70	accents floor tile Grey and tan sheet vinyl flooring	building	3% chrysotile 25% chrysotile
5517-1-70	Grey and tan sheet vinyl flooring Drywall joint compound with sand	building Office, at north east end of building	25% chrysotile
	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted	building Office, at north east end of	-
5517-1-70	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with	building Office, at north east end of building	25% chrysotile
5517-1-70 5517-1-71	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted	building Office, at north east end of building Corridor, at north east entry door	25% chrysotile <1% chrysotile
5517-1-70	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green	building Office, at north east end of building	25% chrysotile
5517-1-70 5517-1-71	accents floor tile Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with	building Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door	25% chrysotile <1% chrysotile None
5517-1-70 5517-1-71	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted	building Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door	25% chrysotile <1% chrysotile None
5517-1-70 5517-1-71 5517-1-72	accents floor tile Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with	building Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door	25% chrysotile <1% chrysotile None
5517-1-70 5517-1-71 5517-1-72	accents floor tile Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with	building Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door	25% chrysotile <1% chrysotile None
5517-1-70 5517-1-71 5517-1-72 5517-1-73	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION	Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door	25% chrysotile <1% chrysotile None None ASBESTOS
5517-1-70 5517-1-71 5517-1-72 5517-1-73	accents floor tile Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted	Duilding Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office	25% chrysotile <1% chrysotile None None ASBESTOS
5517-1-70 5517-1-71 5517-1-72 5517-1-73 FIELD ID 5517-1-74	accents floor tile Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION Drywall joint compound	Duilding Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office Corridor at Maintenance Tech	25% chrysotile <1% chrysotile None None ASBESTOS TYPE(%) None
5517-1-70 5517-1-71 5517-1-72 5517-1-73 FIELD ID	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION	Duilding Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office	25% chrysotile <1% chrysotile None None ASBESTOS TYPE(%)
5517-1-70 5517-1-71 5517-1-72 5517-1-73 FIELD ID 5517-1-74	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION Drywall joint compound Gypsum board wall covering	Duilding Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office Corridor at Maintenance Tech Services Chief's office Office at south west end of	25% chrysotile <1% chrysotile None None ASBESTOS TYPE(%) None None
5517-1-70 5517-1-71 5517-1-72 5517-1-73 FIELD ID 5517-1-74	accents floor tile Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION Drywall joint compound	Duilding Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office Corridor at Maintenance Tech Services Chief's office Office at south west end of	25% chrysotile <1% chrysotile None None ASBESTOS TYPE(%) None None
5517-1-70 5517-1-71 5517-1-72 5517-1-73 FIELD ID 5517-1-74	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION Drywall joint compound Gypsum board wall covering Fiberboard ceiling material	Duilding Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office Corridor at Maintenance Tech Services Chief's office Office at south west end of	25% chrysotile <1% chrysotile <1% chrysotile None None ASBESTOS TYPE(%) None None None Drywall NAD,
5517-1-70 5517-1-71 5517-1-72 5517-1-73 FIELD ID 5517-1-74 5517-1-76	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION Drywall joint compound Gypsum board wall covering Fiberboard ceiling material Gypsum board wall covering and	Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office Corridor at Maintenance Tech Services Chief's office Office at south west end of building, above suspended ceiling	25% chrysotile <1% chrysotile <1% chrysotile None None ASBESTOS TYPE(%) None None None Drywall NAD, joint compound
5517-1-70 5517-1-71 5517-1-72 5517-1-73 FIELD ID 5517-1-74	Grey and tan sheet vinyl flooring Drywall joint compound with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, green painted Gypsum board wall covering with sand textured surfacing, tan painted DESCRIPTION Drywall joint compound Gypsum board wall covering Fiberboard ceiling material	Duilding Office, at north east end of building Corridor, at north east entry door Corridor, at north east entry door Corridor, at north east entry door LOCATION Corridor at Maintenance Tech Services Chief's office Corridor at Maintenance Tech Services Chief's office Office at south west end of	25% chrysotile <1% chrysotile <1% chrysotile None None ASBESTOS TYPE(%) None None None Drywall NAD,

ACM QUANTITY SUMMARY Ft. Bragg Building 5517

Material Descriptions	Units				Area	Descrip	otions								
		Storerooms	Procurement	South West Offices	Corridor, Southern Half	Corridor, northern Half	Warehouse Area Ladie's R	Recreation Services	Conference Room	Break Room	South East Men's RR	South East Ladie's RR	Exterior	Roof	Total
Floorcovering	S.F.	50	306	175	410		90	1290			64	180			2565
Caulking Material	L.F.												20		20
Asbestos Cement Board Wall and Ceiling Covering	S.F.	620													620
TSI Pipe Run 5" OD	L.F.	·	·	3											3
2' X 2' Random Pattern Ceiling Tile, Foil Backed, Pink	S.F.								350						350
Roofing Cement	S.F.														450

MATERIAL CHARACTERIZATION AND ASSESSMENT BUILDING 5517 Ft. BRAGG NORTH CAROLINA

	MATERIAL		CHARACTERIST	ics		ASSESSMENT
Туре	Description	Asbestos yes/no/ assumed	Quantity (If ACM)	Friable Non- Friable	Condition	Disturbance Potential
Miscellaneous	Vinyl floor covering & mastic	Yes 2-25%	2575	Non-friable	Damaged	Potential damage from foot traffic, moving equipment ect.
Miscellaneous	Caulking material	Yes 10%	20 L.F.	Non-friable	Significantly 'Damaged	High potential for disturbance due to accessibility to general public
TSI	TSI pipe run insulation	Yes 60%	3 L. F.	Friable	Significantly 'Damaged	Moderate potential for disturbance
Miscellaneous Miscellaneous	Asbestos cement board Roofing cement	Yes 60% Yes 5-15%	620 S.F. 450 S.F.	Non-friable Non-friable	Damaged Good	Low
Miscellaneous	2' X 2' Ceiling tile	Yes 3%	350 S. F.	Friable	Good	Low

Plates

(See Contract Drawings)

Plate 1	Plate 1.dgn	Room designations
Plate 2	Plate 2.dgn	First floor sample locations
Plate 3	Plate 3.dgn	Exterior sample locations
Plate 4	Plate 4.dgn	Roof sample locations
Plate 5	Plate 5.dgn	Asbestos containing flooring materials locations
Plate 6	Plate 6.dgn	Asbestos containing ceiling materials locations
Plate 7	Plate 7.dgn	Asbestos containing wall covering materials locations

22 March 2002 CESAS-EN-GGe

Figures

Figure 1 Floor Tile

Figure 2 Caulking Material
Figure 3 ACM TSI

Figure 4 Roofing Cement



Figure 1. Both black with white highlights and white with black highlights 12" X 12" floor tiles contain positive amounts of asbestos.



Figure 2. Caulking material at brick chimney contains asbestos.



Figure 3. TSI pipe insulation at unit heater in ceiling of office contains asbestos.



Figure 4. Roofing cement used as flashing and patching at metal roof vents and brick chimneys as well as junctions of roof sections contains asbestos.

Appendix 1



HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A - Marietta, Georgia 30066-6299 - (770) 514-6933, FAX (770) 514-6966

US Army Corp of Engineers Environmental & Materials Unit 200 North Cobb Parkway Bldg. 400, Ste. 404 Marietta, GA 30062 3/27/2002

Subject:

Hygeia Project Number: A0203023 Client Project Number/Name: 7454 /Fort Bragg - Building 5517

Dear Mr. Tim Jones:

Enclosed are the analytical results of bulk samples submitted by you to this laboratory on 3/18/2002. All analyses were performed by polarized light microscopy (PLM) in accordance with the EPA method as defined in Perkins and Harvey, July 1993, "Methods for the Determination of Asbestos in Bulk Materials" 61pp. (EPA/600/R-93/116). The reported percentages are volume estimates obtained by calibrated visual estimation. The results in this report apply only to the items tested.

The EPA defines an asbestos containing material (ACM) as a material that is reported to contain greater than one percent asbestos. HYGEIA is only responsible for the accuracy of the analytical results provided in this report and cannot be held responsible for the errors resulting from improper sample collection techniques. This report may not be used to claim product endorsement by NVLAP or any other U.S. Government agency.

For nonhomogeneous samples, each layer was analyzed separately and the results combined to form the reported value except where otherwise noted. Vinyl floor tile samples with negative results by PLM should be submitted for confirmation by transmission electron microscopy (TEM). Friable samples containing less than 10% asbestos as determined by PLM may be resubmitted for point counting at your discretion.

Thank you for using our analytical services. HYGEIA Laboratories has been NVLAP accredited since 1988. Our current NVLAP code is 102087-0. We will keep a copy of this report on file for three years. We will dispose of your samples in 60 days unless you request that we return them. This report my be reproduced only in its entirety with the consent of Hygeia Laboratories, Inc. If you have any questions, please call us at (770) - 514-6933.

Sincerely,
Clayton Cel

Clayton Call Asbestos Laboratory Manager

NVLAP#
Texas Dept. of Health #

102087-0 30-0232

Commonwealth of Virginia # 3333-000210

- An ATC Group Services Inc. Company

Comment:	5517-R-5	Client #	Comment: N	5517-R-4	Client #	Comment: N	5517-R-3	Client #	Comment: N	5517-R-2	Client #	Comment: N	5517-R-1	Client #	Sample ID	1300 Wi Maı (' Hygeia Proje Client Projec
	A0203023-05	Hygeia #	Comment: No Asbestos Detected	A0203023-04	Hygeia #	Comment: No Asbestos Detected.	A0203023-03	Hygeia #	Comment: No Asbestos Detected.	A0203023-02	Hygeia #	Comment: No Asbestos Detected.	A0203023-01	Hygeia #	Je ID	1300 Williams Drive, Suite A Marietta, GA 30066 (770) 514-6933 Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517
	Black	Color	2	Black	Color	čd.	Black	Color	Ĕ.	Black	Color	ed.	Black	Color	Sample	ite A 03023 : 7454 / F
	Gummy	Texture		Fibrous	Texture		Fibrous	Texture		Fibrous	Texture		Fibrous	Texture	Sample Description	on Bragg
	8	Hornog.		8	Hornog.		8	Hornog.		š	Homog.		₹	Hornog.	tion	ı - Building
	10%	定			SEE.						OF Er			Chr.		j 5517
		Am			Am.			Am.			Am.			Am.	Asbes	- , P
		Cre			Cro.			Cro.			Cre.			Cre	Asbestos Percent	\nalysis (
		<u>An</u>			An.			<u>A</u> n.			₽			An.	ent	PLM Analysis Summary
		MI			T/A			T/A			I/A			T/A		
		Cell		70%	<u>Ce</u>		55%	<u>Q</u>		70%	Cell		10%	Cell.	Oth	
		Glass			Glass			Glass			Glass			Glass	Other Fibers	Analy
		R			ig R			유			양			유		Page: 1 of 16 zed: 3/19/200
	90%	B/F		30%	B/F		45%	B/F		30%	B/F		90%	B/F	Non	Page: 1 of 16 Analyzed: 3/19/2002 by JC
		ONE			ONF			ONF			ONF			ONF	Non - Fibers	ັດ

Hygeia Project Nu Client Project Nun Sample ID	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517 Sample ID Sample Description	3023 7454 / F Sample	3023 7454 / Fort Bragg - Buil Sample Description	- Building	5517	Asbes	Asbestos Percent		·. -	O#	Analy Other Fibers	Page: 2 of 16 Analyzed: 3/19/2002 by JC ibers	of 16 9/2002 by JC Non - Fibers	ļ. <
Client #	Hygeia #	Color	Texture	Hornog.	CIET.	Am.	Cini	An.	IΜ	Cell.	Glass	유	B/F	
5517-R-6	A0203023-06	Black	Fibrous	₹						Ş			90%	6
Comment: N	Comment: No Asbestos Detected.	ed.								5				
Client #	Hygeia #	Color	Texture	Homeo	DE	ß	Cip.	₽	T/A	<u>[6</u>	Glass	R	B/F	
5517-R-7	A0203023-07	Black	Fibrous	8				0.00		70%			30%	
Comment: No	Comment: No Asbestos Detected.	ed												
Client #	Hygeia #	Color	Texture	Homog.	CET.	Am.	Cre	₽	T/A		Glass	Ŕ	B/F	
5517-R-8	A0203023-08	Gray	Fibrous	8	88					2%		TOTAL STATE	90%	
Comment:														
Client #	Hygeia #	Color	Texture	Hornog.	CHL	8	8	₽	T/A	Cell.	Glasss	R	BIF	
5517-R-9	A0203023-09	Ong Ong	Cons.	₹	15%								85%	
Comment:														
Client #	Hygeia #	Color	Texture	Homeg.	E.	þ	el S	₿	T/A	<u>[6</u>	Class	R	B/F	
5517-R-10	A0203023-10	Gray	Gummy	₹	5%		7. C						95%	
Comment:														

Hygeia Project Client Project	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517	3023 7454 / F	ort Bragg	- Building	5517						Analy	Page: 3 of 16 zed: 3/19/2002	Page: 3 of 16 Analyzed: 3/19/2002 by WAS	WAS	
Sample ID	D	Sample	Sample Description	tion		Asbes	Asbestos Percent	ät		Oth	Other Fibers		Non -	Non - Fibers	ı
Client #	Hygeia#	Color	Texture	Hornog.	CF CF	Am.	Cro.	<u>An</u>	T/A	<u>Cel</u>	Glass	유	P.	ONE	
5517-R-11	A0203023-11	Black	Cons.	8									100%		
Comment: No	Comment: No Asbestos Detected.	ř													
														•	
Client #	Hygeia#	Color	Texture	Hormog.	CIT	B	Cro	₽	T/A	Cell.	Glass	R	B/F	ONF	
5517-R-12	A0203023-12	Black	Cons.	¥ 8						80%			40%		
Comment: No	Comment: No Ashestos Detected.	Å										erio Sente			
Client #	Hygeia #	Color	Texture	Нотод	Chr.	Am.	Cro	₽.	IΙΑ	<u>F</u>	Glass	엁	B/F	ONF	
5517-R-13	A0203023-13	Black	Cummy	*					46	20%			80%		
Comment: No	Comment: No Ashestos Detected.	er Č											٠.		
Client#	Hygeia #	Color	Texture	Homog	CHT.	A	E C	<u>A</u>	AII AII	<u>Ce</u>	Glass	P	B/F	ONF	
5517-R-14	A0203023-14	Black	Fibrous	š						40%			60%		
Comment: No	Comment: No Asbestos Detected.	•													
Client #	Hygeia #	Color	Texture	Hornog.	<u>대</u>		8	₽	T/A	<u>≣</u>	Glass	유	B/F	ONF	
5517-R-15	A0203023-15	Black	Fibrous	8						70%			30%		
Comment: No	Comment: No Asbestos Detected.	ř													

Sample ID Sample	Sample Description	tion		Asbes	Asbestos Percent	nt		Othe	Other Fibers	 	Non - Fibers	Fiber
Client # Hygeia # Color	Texture	Hornog.	C <u>P</u>	Am	Cre e	<u>A</u>	I/A	Cell.	Glass	일	PF.	ONE
5517-R-16 A0203023-16 Brown	Fibrous	×8						10%			80%	
Comment: No Asbestos Detected.												
					9 37							
Client # Hygeia # color	Texture	Homog.	₽	B	Cro.	₽	T/A	<u>[6]</u>	Glass	R	B/F	ONE
5517-R-17 A0203023-17 Black	Fibrous	š						40%			60%	
Comment: No Asbestos Detected.												
Client # Hygeia # Color	Texture	Homog.		Am.	Cip Cip	₽	I/A	<u>Cel</u>	Glass	Ŕ	B/F	ONF
5517-R-18 A0203023-18 Black	Fibrous	*	10%		4.1		A	5%			85%	
Comment:												
Client# Hygeia# Color	Texture	Homog	₽	a	Co	A.	T/A	<u>Ce</u>			BP.	ONE
5517-R-19 A0203023-19 Black	Fibrous	₹						30%			70%	
Comment: No Asbestos Detected.												
Client # Hygeia # Color	i eduje	Homog.	<u>S</u>	}	8	}	™	<u>[</u>		R	P.	ONE
5517-R-20 A0203023-20 Black	Fire and the second	₹ .						70 %			30%	

Client Project	Client Project Number/Name: 7454 / Fort Bragg - Building 5517	7454 / F	ort Bragg	- Building	5517						Analy	Page: 5 of 16 rzed: 3/19/2002	Page: 5 of 16 Analyzed: 3/19/2002 by JC	JC V
Sample ID	ਰ ਹ	Sample	Sample Description	tion		Asbes	Asbestos Percent	e		9	Other Fibers		N O	Non - Fibers
Client #	Hygeia #	Color	Texture	Homog.	Chr	Am.	Cro.	<u>A</u>	ĭ.	Cell.	Glass	[유 	B/F	ONE
5517-R-21	A0203023-21	Black	Fibrous	8						30 %			70%	
Comment: No	Comment: No Asbestos Detected.	Ă												
Client #	Hygeia #	<u>8</u>	Texture	Homog.	율	š	C	}	7 /	<u>2</u>	2	n N	p n	
5517-R-22	A0203023-22	Black	Fibrous	₹						70%			3	
omment: No	Comment: No Asbestos Detected.	ř												
Client #	Hygeia #	Color	Texture	Homog.	5	Am.	Cig Cig	<u>An</u>	ĪΆ	<u>€</u>	Glass	R	P.	ONF
5517-R-23	A0203023-23	Black	Fibrous	₹						20%			%08 %	
omment: No	Comment: No Asbestos Detected.											110 A 100		
Client #	Hygeia #	Color	<u>Texture</u>	Homog	F		<u>C</u>	An.	II _M	Cell	Glass	P	B/F	ONE
5517-E-24	A0203023-24	¥n#e	Caulky	8									100%	
omment: No	Comment: No Asbestos Detected.	-												
Client #	Hygeia #	Color	Texture	Homog.	CF.	¥	(S)	₽	ĭ≱	₹	Glass	R	B/F	ONF
5517-E-25	A0203023-25	ᆰ	Cons.	ĕ									100%	
omment: No	Comment: No Asbestos Detected.	F												

Client # Chysele # Code Texture Homog. Chr. Am. Cro. An. Comment: No Asbestos Detected.	Sample ID	D D	Sample	Sample Description	tion .	?	Asbes	Asbestos Percent		T/A	<u>₽</u>	ゖヸ	ner Fibers	İ	ه ۱
Color Texture Homoga Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Color Texture Homoga Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Color Texture Homoga Chr. Am. Cro. Gray Cons. No 10% Am. Cro. Color Texture Homoga Chr. Am. Cro.	5517-E-26	A0203023-26	Brown	Fibrous	Yes Q	Ę	•	Ç	P	5		70%	70%		
Color Texture Homog. Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Color Texture Homog. Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Color Texture Homog. Chr. Am. Cro. Gray Cons. No 10% Texture Homog. Chr. Am. Cro. Color Texture Homog. Chr. Am. Cro.	Comment: No	Asbestos Detecto	ř												
Color Texture Homog. Chr. Am. Cro. Color Texture Homog. Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Color Texture Homog. Chr. Am. Cro. Gray Cons. No 10% Homog. Chr. Am. Cro. Color Texture Homog. Chr. Am. Cro. Cro.															
Tan Layered No Easture Homog, Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Tan Layered No Chr. Am. Cro. Color Texture Homog, Chr. Am. Cro. Gray Cons. No 10% Chr. Am. Cro. Color Texture Homog, Chr. Am. Cro.	Client #	Hygeia#	Color	Texture	Hormog.	E C	À	Cro.	B	IM		Cell.	Cell. Glass		Glass
Color Texture Homog. Chr. Am. Cro. Tan Layered No. Color Texture Homog. Chr. Am. Cro. Gray Cons. No. 10% Color Texture Homog. Chr. Am. Cro. Color Texture Homog. Chr. Am. Cro.	5517-M-27	A0203023-27	7	Layered	₹							10%	10	10%	10% 90%
Hygeia # Color Texture Homog. Chr. Am. Cro.	Comment: No	Asbestos Detecto	ř												
Hygeia # Color Texture Homog. Chr. Am. Cro.															
8 A0203023-28 Tan Layered No No Asbestos Detected. Hygeia # Color Texture Homosa Chr. Am. Cro. 9 A0203023-29 Gray Cons. No 10% Hygeia # Color Texture Homosa Chr. Am. Cro. A0203023-30 White Fibrous No	Client #	Hygeia #	Color	Texture	Hernog.	CIT.	Am.	Cre	<u>An</u>	T//A		<u>Cell</u>	Cell. Glass		. Glass
No Asbestos Detected. Hygeia # Color Texture Homoa Chr. Am. Cro.	5517-M-28	A0203023-28	5	Layered	8							10%	10% <1%		
Hygeia # Color Texture Homog. Chr. Am. Cro. 9 A0203023-29 Gray Cons. No 10% Hygeia # Color Texture Homog. Chr. Am. Cro. A0203023-30 White Fibrous No	Comment: No	Asbestos Detecte	ř												
9 A0203023-29 Gray Cons. No 10% Hygeia # Codor Texture Homog. Chr. Am. Cro.	Client #	Hygeia #	Color	Texture	Homog.	₽	ß	<u>0</u>	₿	™		<u>Cell</u>	Cell. Glasss		Class
Hygeia # Color Tecture Homog. Chr. Am. Cro. A0203023-30 White Fibrous No	5517-E-29	A0203023-29	Gray	Cons.	₹	10%								•	, 90%
Hygeia # Color Texture Homog. Chr. Am. Cro. A0203023-30 White Fibrous No	Comment:														
Hygeia # Color Texture Homog. Chr. Am. Cro. A0203023-30 White Fibrous No															
A0203023-30 White Fibrous	Client #	Hygeia #	Color	Texture	Hornog.	¥	þ	E S	₿	T/A			Cell. Glass		Glass
	5517-1-30														

Hygeia Project Client Project	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517	3023 7454 / Fi	ort Bragg	- Building	5517						Analy:	Page: 7 of 16 zed: 3/19/2002	Page: 7 of 16 Analyzed: 3/19/2002 by WAS	WAS
Sample ID	e 10	Sample	Sample Description	ion		Asbes	Asbestos Percent	nt		Othe	Other Fibers		Non -	Non - Fibers
Client #	Hygeia #	Color	Texture	Hornog.	C <u>P</u>	Am.	Cro.	An.	IM	Cell Cell	Glass	R	B/F	ONF
5517-1-31	A0203023-31	Multi	Multi Cons.	Yes	60%								40%	
Comment:												*		
Client #	Hygeia #	Color	Texture	Hornog.	CIT.	Am.	Cro.	Þ	T/A	Cell	Glass	유	B/F	ONF
5517-1-32	A0203023-32	Gray	Fibrous	Y 8 8						80%			20%	
Comment: No	Comment: No Asbestos Detected	ř												
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	엵	B/F	ONE
5517-1-33	A0203023-33	Ĭ	Fibrous	8						80%			20%	
Comment: No	Comment: No Asbestos Detected.	*												
												w.		
Client #	Hygeia #	Color	Texture	Нотор.	딽		eg C	<u>A</u>	T/A	Ce <u>l</u>	Glass	R	B/F	ONF
5517-1-34	A0203023-34	Ĭ	Fibrous	₹	20%					10%			70%	
Comment:														
Client #	Hygeia #	Color	Texture	Hornog.	E E	A	Çiğ.	₽	T/A	<u>©</u>	Class	유	B/F	ONE
5517-1-35	A0203023-35	White	Fibrous	8						80%			20%	
Comment: No	Comment: No Asbestos Detected.	ji.												

Comment: No Asbestos Detected.

22 March 2002

Hygeia Project Client Project	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517)3023 : 7454 / F	ort Bragg	- Building	5517						I Analya	Page: 8 of 16 rzed: 3/19/2002	Page: 8 of 16 Analyzed: 3/19/2002 by WAS	WAS	
Sample ID	T	Sample	Sample Description	ion		Asbes	Asbestos Percent	Ä		Othe	Other Fibers		Non -	Non - Fibers	l
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	<u>A</u>	I/A	Cell.	Glass	유	B/F	ONE	
5517-1-36	A0203023-36	White	Cons.	Yes									100%		
Comment: N	Comment: No Asbestos Detected.	2 .													
Client #	Hygeia #	Color	Texture	Homog.	CIE.	A	Cing	B	T/A	Cell.	Glass	유	EVF	ONF	
5517-1-37	A0203023-37	White	Cons.	Yes	88					10%			30%		
Comment:		5-67 (St)r													
Client #	Hygeia #	Color	Texture	Hornog.	Chr.	Am.	Cite.	A	T/A	<u>Cell</u>	Glass	Ř	BVE	ONE	
5517-1-38	A0203023-38	V	Fibrous	₹						40%			60%		
Comment: No	Comment: No Asbestos Detected.	ř													
Client *	L	})	Ì	3	3	1	2			P Fi		
5517-1-39	A0203023-39	Gray	Fibrous	*						45%	20%		35%		
Comment: No	Comment: No Asbestos Detected.	E .													
Client #	Hygeia #	Color	Texture	Homog.	Chr		ලා	₽	T/A	<u>₹</u>	Glass	엹	NF.	ONE	
5517-1-40	A0203023-40	Brown	Cons.	8						40%			60%		

Hygeia Project Client Project	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517)3023 7454 / F	ort Bragg	- Building	5517						Analy	Page: 9 of 16 zed: 3/19/2002	Page: 9 of 16 Analyzed: 3/19/2002 by JC	Č
Sample ID	ē	Sample	Sample Description	tion		Asbes	Asbestos Percent	ent		Oth	Other Fibers		Non -	Non - Fibers
Client #	Hygeia #	Color	Texture	Hornog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	유	BF.	ONE
5517-1-41	A0203023-41	Gray	Cons.	8							5%		95%	
Comment: No	Comment: No Asbestos Detected.	EL .												
Client #	Hygeia #	Color	Texture	Hormog.	E D	þ	Cip.	₽	ΤΙΑ	Cell	Glass	R	B/F	ONF
5517-1-42	A0203023-42	Gray	Gummy	8									100%	
Comment: No	Comment: No Asbestos Detected.													
Client #	Hygeia #	Color	Texture	Hornog.		Am.	Cite.	<u>An</u>	T/A	Cell.	Glasss	P	B/F	ONE
5517-1-43	A0203023-43	Green	Cons.	₹									100%	
Comment: Ti	Comment: Tile and mastic, NAD	Đ.												
Client #	Hygeia #	Color	Texture	Hornog	E.	Am.	Ciro.	An.	T/A	Cell	Glass	Ę	B/F	ONE
5517-1-44	A0203023-44	Black	Cons.	₹	\$								100%	
Comment: Ti	Comment: Tile, NAD. Black mastic, <1% Chrysotile.	ıastic, <1'	% Chryson	F										
Client #	Hygeia #	Color	Texture	Hormog.	E E	A	Cro.	₿	IM	<u>Cell</u>	Glass	R	B/F	ONF
5517-1-45	A0203023-45	Tan	Cons.	8									100%	
Comment: Ti	Comment: Tile and mastic, NAD.	Đ.												

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Hygeia Project Client Project	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517	3023 7454 / Fo	ort Bragg	- Building	5517						Analy	Page: 10 of 16 rzed: 3/19/2002	Page: 10 of 16 Analyzed: 3/19/2002 by JC	ັດ	
Sample ID	e ID	Sample	Sample Description	ğ		Asbes	Asbestos Percent	nt		Oth	Other Fibers	1	Non -	Non - Fibers	1
Client #	Hygeia #	Color	Texture	Homog.	Chr.	<u>Am</u>	Cro.	<u>An</u>	T/A	Cell.	Glass	유	B.	ONE	
5517-1-46	A0203023-46	a an	Tan Cons.	₹	\$								96%		
Comment: Til	Comment: Tile, 4% Chrysotile. Both maastics, NAD.	. Both ma	astics, NA	Þ											
Client #	Hygeia #	Color	Texture	Homog.	₽	þ	6	₿	IΆ	<u>Cell</u>	Glasse	R	B/F	ONE	
5517-1-47	A0203023-47	White	Fibrous	8						60%	5%		35%		
Comment: No	Comment: No Asbestos Detected.	ä.													
						1,80 113 113									
Client #	Hygeia #	Color	Texture	Hornog.	CH.	Am.	Cro	₽	Τ/A	<u>[</u>	Class	Ŋ.	B/F	ONF	
5517-1-48	A0203023-48	White	Layered	8						10%			90%		
Comment: No	Comment: No Asbestos Detected.	2													
Client #	Hygeia #	Color	Texture	Homog.	얦	þ	Cro.	An.	T/A	Cell.	Glass	P	B)F	ONF	
5517-1-49	A0203023-49	White	Fibrous	8						60%	5%		35%		
Comment: No	Comment: No Asbestos Detected.	2													
Client #	Hygeia #	Color	Texture	Hornog.	Chr.	<u>Am</u>	Cro.	₽	I/A	<u>6</u>	Glass	뭐	B/F	ONF	
5517-1-50	A0203023-50	White	Cons.	8									100%		
Comment: Tii	Comment: Tile and mastic, NAD.	Ð.													

Hygeia Project Client Project	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517)3023 7454 / F	ort Bragg	- Building	5517						Analy	Page: 11 of 16 rzed: 3/19/2002	Page: 11 of 16 Analyzed: 3/19/2002 by JC	J.
Sample ID	e ID	Sample	Sample Description			Asbes	Asbestos Percent	Ž		Oth	Other Fibers		Non -	Non - Fibers
Client #	Hygeia #	Color	Texture	Hornog.	CET.	Am.	Cro.	<u>An</u>	IΜ	<u>E</u>	Glass	유	B/F	ONF
5517-1-51	A0203023-51	White	Fibrous	8						60%	5%		35%	
Comment: No	Comment: No Asbestos Detected.	<u>r</u>												
Client #	Hygeia#	Color	Texture	Homog.	Chr.	Þ	<u>on)</u>	₽	ΑΝΤ	<u>Cell</u>	Glass	R	B/F	ONF
5517-1-52	A0203023-52	Black	Cons.	₹	\$								100%	
Comment: Ti	Comment: Tile, NAD. Mastic, <1% Chrysotile.	<1% Chr	ysotile.											
Client #	Hygeia #	Color	Texture	Homog.	CH L	Am.	Cro.	An.	A/I	Cell.	Glass	R	B/F	ONF
5517-1-53	A0203023-53	ğ	Cons.	₹	2%								98%	
Comment: Ti	Comment: Tile, 2% Chrysotile. Mastic, NAD.	. Mastic,	NAD.											
		1000												
Client #	Hygeia #	Color	Texture	Hornog.	<u>다.</u>	B	<u>6</u>	<u>An</u>	I/A	Cell.	Glass	lö	B/F	ONE
5517-1-54	A0203023-54	Black	Cons.	8	2%								98%	
Comment: Ti	Comment: Tile, 2% Chrysotile. Mastic, NAD.	Mastic,	NAD.											
Client #	Hygeia#	Color	Texture	Homog.	Chr.	Am.	<u>Cro</u>	₽	MI	<u>Cell</u>	Glass	R	8/F	ONE
5517-1-55	A0203023-55	Gray	Layered	8							5%		95%	
Comment: No	Comment: No Asbestos Detected.	ed.												

Hygeia Projec Client Project	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517)3023 7454 / Fi	ort Bragg	- Building	5517						Analy	Page: 12 of 16 rzed: 3/19/2002	Page: 12 of 16 Analyzed: 3/19/2002 by JC	JC
Sample ID	e	Sample	Sample Description	ion		Asbes	Asbestos Percent	nt		Oth	Other Fibers		Non	Non - Fibers
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	<u>A</u>	T/A	<u>6</u>	Glass	유	B.	ONE
5517-1-56	A0203023-56	T	Cons.	8	2%								98%	
Comment: Ti	Comment: Tile, 2% Chrysotile. Not enough mastic to analyze.	. Not enou	ıgh mastic	to analyz	S.									
Client #	Hygeia #	Color	Texture	Homog.	E E	B	<u>Crp.</u>	<u>p</u>	T/A	Cell	Glass	R	P.	ONE
5517-1-57	A0203023-57	White	Cons.	₹						60%	5%		35%	
Comment: No	Comment: No Asbestos Detected.	ř												
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	<u>Cro</u>	An.	I/A	<u>[6</u>	Glass	R	PF.	ONE
5517-I-58PR	A0203023-58	White	Fibrous	₹	60%					5%			35%	
Comment:		新传												
Client #	Hygeia#	Color	Lexture	Нотод.		₿	Ωng.	<u>An</u>	T/A	<u>E</u>	Glass	P.	B/F	ONF
5514-1-59	A0203023-59	Black	Gummy	Y es									100%	
Comment: No	Comment: No Asbestos Detected.	<u>e</u>												
Client #	Hygeia #	Color	Texture	Hornog.	얉	₽	ම් දුම	₽	T/A	Cell.	Glass	유	B/F	ONF
5517-1-60	A0203023-60	White	Cons.	8									100%	
Comment: No	Comment: No Asbestos Detected.	ed.												

Hygeia Project Number: A0203023 Cilent Project Number/Name: 7454 / Fort Bragg - Building 5517	Hygeia Project Number: A0203023 Client Project Number/Name: 7454	3023 7454 / Fo	ort Bragg -	Building !	5517						I Analya	Page: 13 of 16 /zed: 3/19/2002	Page: 13 of 16 Analyzed: 3/19/2002 by WAS	WAS
Sample ID	5	Sample	Sample Description	9		Asbest	Asbestos Percent	ᇍ	 	Othe	Other Fibers		Non-	Non - Fibers
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	T/A	Cell	Glass	뭐	PF.	ONE
5517-1-61	A0203023-61	White	Cons.	8	% 2								100%	
Comment: Til	Comment: Tile, NAD. Mastic, 7% Chrysotile.	7% Chrys	offile.											
Client #	Hygeia #	Color	Texture	Homog.	E.	A	Cro.	<u>A</u>	T/A	<u>Cell.</u>	Glass	엁	B/F	ONE PE
5517-1-62	A0203023-62	White	Cons.	Yes									100%	
Comment: Til	Comment: Tile, NAD. Not enough mastic to analyze.	ugh mastic	: to analyz											
Client #	Hygeia#	Color	Texture	Homog.	Chr.	Am.	Çig.	<u>An</u>	T/A	Cell	Glass	P	B/F	ONE
5517-1-63	A0203023-63	Black	Cons.	×s									100%	
Comment: Til	Comment: Tile, NAD. Not enough mastic to analyze.	ugh masti	c to analyz											
									167 1417 No.					
Client #	Hygeia#	Color	Texture	Homog.	SE.	₽	an 2	<u>A</u>	I/A	<u>Cell</u>	Glasss	R	B/F	ONF
5517-1-64	A0203023-64	Black	Cons.	š									100%	
Comment: Til	Comment: Tile and mastic, NAD.	Ė												
Client #	Hygeia #	Color	Texture	Homog.	C <u>P</u>	Am.	Cro.	<u>A</u>	T/A	<u>e</u>	Glass	P	PF	ONE
5517-1-65	A0203023-65	Green	Cons.	Yes						30%			70%	
Comment: Ti	Comment: Tile and mastic, NAD.	AD.												

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Client Projec	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517	3023 7454 / F	ort Bragg	- Building	5517						Analy	Page: 14 of 16 Analyzed: 3/19/2002 by WAS	of 16 9/2002 by	WA
Sample ID	ě ID	Sample	Sample Description	tion		Asbes	Asbestos Percent	'n		Oth	Other Fibers		Non - Fibers	'n
Client #	Hygeia #	Color	Texture	Hornog.	CHI	Am.	Cro.	<u>An</u>	MΙ	<u>E</u>	Glass	유	B/F	ONE
5517-1-66	A0203023-66	Brown	Brown Cons.	ž						20%			80%	
Comment: N	Comment: No Asbestos Detected.	ř												
Client #	Hygeia #	Color	Texture	Hormog.	얉	产	<u>Cro</u>	₿	MΙ	Cell.	Glass	R	8/F	ONE
5517-1-67	A0203023-67	Brown	Cons.	š.						40%			60%	
Comment: N	Comment: No Asbestos Detected.	۲												
Client #	Hygeia#	Color	Texture	Hornog.	Chr.	Am.	Cre.	<u>A</u>	N/I	Cell	Glass	R	B/F	ONE
5517-1-68	A0203023-68	퇉	Cons.	₹	3%						37%		80%	
Comment:														
Client #	Hygeia #	Color	Texture	Homog.	EFF.	角	කුට	<u>A</u>	T/A	<u>Cell</u>	Glass	肾	BVF	ONF
5517-1-69	A0203023-69	Black	Cons.	₹	3%								97%	
Comment: T	Comment: Tile, 3% Chrysotile. Mastic, NAD.	. Mastic,	NAD.											
Client #	Hygeia #	Color	Texture	Hormog.	EFF.	A	ē Cē	<u>A</u>	T/A	Cell	Glass	R	B/F	ONE
5517-1-70	A0203023-70	Gray	Cons.	*	25%					10%			65%	
Comment:														

	5517-1-75 AC	Client # Hy	Comment: No Asbestos Detected.	5517-1-74 A02	Client # Hy	Comment: Drywall and grey "popcorn" layer, NAD. No joint compound present.	5517-1-73 A02	Client # Hy		Comment: Drywall and "popcorn" layer, NAD. No joint compound present.	5517-1-72 A0	Client # Hy		Comment: No drywall layer present. No "popcorn" layer present.	5517-1-71 A03	Client # Hy	Sample ID	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517
200020-10	A020202-75	Hygeia #	stos Detected	A0203023-74	Hygeia#	and grey "p	A0203023-73	Hygeia#		and "popcoi	A0203023-72	Hygeia #		all layer pre	A0203023-71	Hygeia #		ber: A0203 ber/Name: 7
Giay	D P	Color		Gray	Color	opcorn"	Green	Color		m" layer	Green	Color		sent. No	Gray	Color	Sample)023 7454 / Fc
Ownery	Downlan	Texture		Powdery	Texture	layer, NA	Powdery	Texture		, NAD. N	Powdery	Texture		"popcorn	Gray Powdery	Texture	Sample Description	nt Bragg
g	š	Homog.		ŝ	Hormog.	D. No join	8	Hornog.		joint com	8	Hornog.		" layer pr	8	Homog.	ion I	- Building
					얆	t compou		얉		pound pr		엹		esent.	2%	Chr.		5517
		Am.			B	nd present		Am.		esent.		Am				Am.	Asbest	
		Cro.			Cro.	•		Cro.				Cro.				Cro.	Asbestos Percent	
		₽.			<u>A</u>			<u>A</u>				₽				Þ	2	
		T/A			IM			N/I				I/A				T/A		
8	j Ž	<u>©</u>		10%	Cell.		10%	<u>E</u>			20%	Cell.			18%	Cell	Othe	
		Glasss			Glass			Glass				Glasss				Glass	Other Fibers	I Analya
		엁			ig.		÷ å	R	jil.			R	140 <u>01</u>			R		Page: 15 of 16 zed: 3/19/2002
8	9	B/F		90%	B/F		90%	B/F			80%	PF.			80%	PF	Non -	Page: 15 of 16 Analyzed: 3/19/2002 by CC
		ONF			ONE			ONF				ONE				ONF	Non - Fibers	8

Hygeia Project Nun Client Project Nun Sample ID Client # H 5517-1-76 A Comment: No Ash	Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517 Sample ID Sample Description Client # Hygeia # Color Texture Homog. Ch 5517-1-76 A0203023-76 Brown Fibrous Yes Comment: No Asbestos Detected.	3023 7454 / Fr. Sample Sample Color Brown	5023 7454 / Fort Bragg - Build Sample Description Color Texture Home Brown Fibrous Yend.	t Bragg - Building to Description	5517 <u>Chr.</u>	As bes	Asbestos Percent Am. Cro. Am. Cro.		Ap.	ent IA An. IA An. IA	An. IIA C	Other F An. I/A Cell. 95% An. I/A Cell.	Other F An. I/A Cell. 95% An. I/A Cell.	Analyzed Other Fibers An. I/A Cell. Glass 95% An. I/A Cell. Glass
<u> </u>	Client # Hygeia # Color Tedure Homog. Chr. Am. 5517-1-77 A0203023-77 Gray Powdery No <1% Comment: Drywall and "noncorn" layer. NAD. Joint compound. 2% Chrysotile.	Color Gray	Texture Powdery NAD. J	Homog.		B					™	T/A Cell. 20%	<u>II/A Cell. Glass</u> 20%	<u>TI/A</u> <u>Cell.</u> <u>Giass</u> <u>OF</u> 20%
Client#	Hygeia #	Color Grav	Texture Powderv	Homog. Yes	<u>P</u>	<u>А</u> т.	<u>Cre</u>		A .	An. TIA		T/A	<u>T/A</u> <u>Cell.</u>	T/A Cell Glass
Comment: Jo	Comment: Joint compound, NAD. No drywall present.	D. No dr	ywall pre	Sent.										
abbreviations: Chr. = chrysotile Am. = amosite Cro. = crocidolite An. = anthophyll T/A = tremolite/s	= chrysotile = amosite = crocidolite = anthophyllite = tremolite/actinolite		cell glass syn sty det	cell = cellulose glass = fibrous glass syn = synthetic sty = styrene foam det = detected	glass glass	per ver MF B/F	per = perlite ver = vermiculite MF = Mineral filler B/F = Binder / filler NAD = No asbestos detected	8 E E E	e ler ller	e ler ller		OF ONF Cons	OF ONF Cons	

Percentages derived by point counting using the folowing formula: A/400 X 100% Where A = the total asbestos points counted

Detection Limit is 1% total asbestos.

Hygeia Laboratories Inc. 1300 Williams Drive, Suite A

Comments: 3 points	5517-I-77 A03	Client Sample #	Comments: 2 points	5517-I-71 A07	Client Sample #	Poir Hygeia Project Number: A0203023 Client Project Number/Name: 7454 / Fort Bragg - Building 5517	1300 Williams Drive, Suite A Marietta, GA 30066 (770) 514-6933
3 points counted.	A0203023-77	Hygeia #	2 points counted.	A0203023-71	Hygeia #	A0203023 me: 7454 / F	Suite A 3
	<1%	Chryso		<1%	Chryso	ort Bragg - Buildi	
		Amosite			Amosite	Point Count Summary	
		Crocid			Crocid	Summary	
		Antho			Antho		
		Trem Actin			Trem Actin	Page:	
	99.25%	Binder Matrix		99.5%	Binder Matrix	1 of 1	3/27/2002

Chain of Custody

Project:	Ft. Bragg Bldg. 5517	EMU Job No.: 7454
Samplers:	Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/12/02	5517-R-1	43432	Roof shingle
3/12/02	5517-R-2	43433	Roofing felt
3/12/02	5517-R-3	43434	Rolled roofing
3/12/02	5517-R-4	43435	Roofing felt
3/12/02	5517-R-5	43436	Roofing cement
3/12/02	5517-R-6	43437	Rolled roofing
3/12/02	5517-R-7	43438	Roofing felt
3/12/02	5517-R-8	43439	Roofing cement
3/12/02	5517-R-9	43440	Roofing cement
3/12/02	5517-R-10	43441	Roofing cement
3/12/02	5517-R-11	43442	Rolled roofing
3/12/02	5517-R-12	43443	Roofing felt
3/12/02	5517-R-13	43444	Roofing cement
3/12/02	5517-R-14	43445	Roof shingle
3/12/02	5517-R-15	43446	Roofing felt
3/12/02	5517-R-16	43447	Roof shingle
3/12/02	5517-R-17	43448	Built up roofing
3/12/02	5517-R-18	43449	Silver flashing cement
3/12/02	5517-R-19	43450	Roof shingle
3/12/02	5517-R-20	43451	Roofing felt
3/12/02	5517-R-21	43452	Rolled roofing
3/12/02	5517-R-22	43453	Roofing felt

Relinquished By	Date	Time	Received By	Date	Time
Tun Jone	3-18-02	1205	Malh	3-18-62	
<i>-</i>					

Comments:	

Project:	Ft. Bragg Bldg. 5517	EMU Job No.: 7454
Samplers:	Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/12/02	5517-R-23	43454	Multi layer roofing
3/12/02	5517-E-24	43455	Window caulking compound
3/12/02	5517-E-25	43456	Window glazing compound
3/12/02	5517-E-26	43457	Felt paper
3/12/02	5517-M-27	43458	Gypsum board wall covering
3/12/02	5517-M-28	43459	Gypsum board wall covering
3/12/02	5517-E-29	43460	Caulking material
3/12/02	5517-1-30	43461	Composite board wall covering
3/12/02	5517-1-31	43462	Cement board wall covering
3/12/02	5517-1-32	43463	Fiberboard wall covering
3/12/02	5517-1-33	43464	Composite board wall covering
3/12/02	5517-1-34	43465	Vinyl floor covering
3/12/02	5517-1-35	43466	Cloth duct tape
3/12/02	5517-1-36	43467	Floor tile
3/12/02	5517-1-37	43468	Cement board ceiling covering
3/12/02	5517-1-38	43469	Gypsum board wall covering
3/12/02	5517-1-39	43470	Ceiling tile
3/12/02	5517-1-40	43471	Heat shield material
3/12/02	5517-1-41	43472	Heat shield material
3/12/02	5517-1-42	43473	Floor tile
3/12/02	5517-1-43	43474	Floor covering
3/12/02	5517-1-44	43475	Floor tile

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Timson	3-18-02	1205	Il Alm	3-18-00	
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Comments:		
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Project:	Ft. Bragg Bldg. 5517	EMU Job No.: 7454
Samplers:	Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/12/02	5517-1-45	43476	Floor tile
3/12/02	5517-1-46	43477	Floor tile
3/12/02	5517-1-47	43478	Ceiling tile
3/12/02	5517-1-48	43479	Textured wall surfacing
3/12/02	5517-1-49	43480	Ceiling tile
3/12/02	5517-1-50	43481	Floor tile
3/12/02	5517-1-51	43482	Ceiling tile
3/12/02	5517-1-52	43483	Floor tile
3/12/02	5517-1-53	43484	Floor tile
3/12/02	5517-1-54	43485	Floor tile
3/12/02	5517-1-55	43486	Textured wall surfacing
3/12/02	5517-1-56	43487	Floor tile
3/12/02	5517-1-57	43488	Ceiling tile
3/12/02	5517-1-58PR	43489	TSI pipe run
3/12/02	5517-1-59	43490	Black surfacing material
3/12/02	5517-1-60	43491	Floor tile
3/12/02	5517-1-61	43492	Floor tile
3/13/02	5517-1-62	43493	Floor tile
3/13/02	5517-1-63	43494	Floor tile
3/13/02	5517-1-64	43495	Floor tile
3/13/02	5517-1-65	43496	Sheet vinyl floor covering
3/13/02	5517-1-66	43497	Gypsum board ceiling covering

Relinquished By	Date	Time	Received By	Date	Time
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0			Jo of the second		

Comments:	
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Project:	Ft. Bragg Bldg. 5517	EMU Job No.: 7454
Samplers:	Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/13/02	5517-1-67	43498	Gypsum board wall covering w texturing
3/13/02	5517-1-68	43499	Ceiling tile
3/13/02	5517-1-69	43500	Floor tile
3/13/02	5517-1-70	43501	Floor covering
3/13/02	5517-1-71	43502	Drywall joint compound w texturing
3/13/02	5517-1-72	43503	Gypsum board wall covering
3/13/02	5517-1-73	43504	Gypsum board wall covering w texturing
3/13/02	5517-1-74	43505	Drywall joint compound
3/13/02	5517-1-75	43506	Gypsum board wall covering
3/13/02	5517-1-76	43507	Fiber board wall covering
3/13/02	5517-1-77	43508	Gypsum board wall covering w texturing
3/13/02	5517-1-78	43509	Drywall joint compound
			V
		/	

Relinquished By	Date	Time	Received By	Date	Time
Timson	3-18-02	1205	Ma Colon	3-18-02	
U					

Comments:				
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Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA / AHERA (TSCA Title II) Approved Accreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997

2360

February 12, 1997
Examination Date

<u>February 11, 1998</u>

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The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation and NESHAP Regulations Training

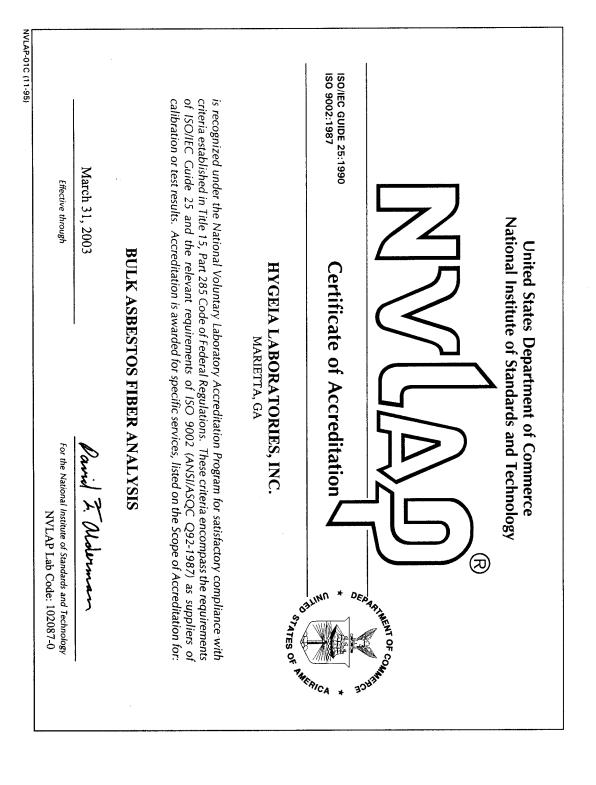
Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

February 26, 2002
Examination Date

February 25, 2003

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600





National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990 ISO 9002:1987

Scope of Accreditation

Page: 1 of 1 NVLAP LAB CODE 102087-0

BULK ASBESTOS FIBER ANALYSIS

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A Marietta, GA 30066-6299 Mr. Clayton Call

Phone: 770-514-6933 Fax: 770-514-6966 E-Mail: call67@atc-enviro.com

NVLAP Code

Designation

18/A01

EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk

Insulation Samples

March 31, 2003

Effective through

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For the National Institute of Standards and Technology

NVLAP-01S (11-95)



U.S. Army Corps of Engineers Savannah District

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

HAZARDOUS MATERIAL REPORT

BUILDING NO. 5517 FORT BRAGG, NORTH CAROLINA



HAZARDOUS MATERIAL REPORT Ft. BRAGG, NORTH CAROLINA BUILDING 5517

INTRODUCTION

- 1. This report documents the hazardous material survey of Building No. 5517 at Ft. Bragg, North Carolina conducted on 12 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District
- 2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials excluding asbestos, which is handled under separate cover.
- 3. Building No 5517 was built in 1941 and is of wood frame construction with a concrete floor slab on grade. The roof system is wooden framing with wood decking covered by an asphalt shingle roof system. No physical sampling of suspect hazardous components was performed, only a visual counting was performed.

SUMMARY

- 4. The florescent and metal halide light count results are presented in Table 1.
- 5. Inspection of the building turned up lead in the plumbing drain and vent piping system and flashing material around piping penetrating the roof. Results are presented in Table 2.
- 6. One confirmed and several suspected mercury-containing switches were located on the boiler. FIVE suspect mercury-containing thermostats were located in the following areas: Northern Corridor Section, Tech Services Admin Office, Procurement Area Corridor and the east wall of the Warehouse Area.

7. An underground fuel oil storage tank was once installed outside the boiler room. Building employees indicate that it has been removed. Associated vent piping still exists.

8. Refrigerant from three central air conditioning systems should be recovered prior to building demolition. 6 window air conditioning units should be removed and refrigerant recovered prior to demolition.

Prepared by:	
	TIMOTHY A. JONES

Tables

TABLE 1 Ft. BRAGG BLDG. 5517 FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	5	2 foot round metal halide fixtures
Interior	13	2 foot square, 2 bulb florescent fixtures
Interior	3	4 foot long, 2 bulb florescent fixtures
Interior	132	4 foot long, 4 bulb florescent fixtures
Interior	22	8 foot long, 2 bulb florescent fixtures

TABLE 2 Ft. BRAGG BLDG. 5517 LEAD BUILDING COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	ESTIMATED NUMBER
Hot poured lead pipe joint	In plumbing drainage, waste and vent piping	Restrooms and under slab	100-150
Lead Flashing	On plumbing vent pipe system	Roof	8

Floor Plan (See separate file, FBR5517HAZ.dgn)



U.S. Army Corps of Engineers Savannah District

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

BUILDING NUMBER 5519 FORT BRAGG, NORTH CAROLINA



HAZARDOUS BUILDING MATERIAL REPORT Ft. BRAGG, NORTH CAROLINA BUILDING 5519

INTRODUCTION

- 1. This report documents the hazardous building material survey of Building 5519 associated with the 16th MP Brigade complex project at Ft. Bragg, North Carolina conducted on 13 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.
- 2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials. Additionally, information from an Asbestos Inspection Report submitted by Alpha Environmental Services of Charleston S.C. in 1997 was reviewed and their findings confirmed.
- 3. Building 5519 was built in 1983 and is used as general-purpose storage. It is constructed of concrete masonry block with a concrete floor slab and a wooden decked and shingle covered roof. No physical samples of suspect hazardous components were taken, only a visual counting was performed.

SUMMARY

- 4. The florescent and metal halide light count results are presented in Table 1.
- 5. No lead building components were located in Building 5519.
- 6. One mercury-containing thermostat was located in Building 5519 on the north wall of an office. See Floor Plan for thermostat approximate location.
- 7. An above ground liquid propane fuel tank of approximately 200 gallons is located to the southeast of Building 5519. Approximate location is indicated on the Floor Plan.

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8. Information contained in the previously indicated Asbestos Report ap complete and appropriate. No further sampling appears necessary.	opears to be

Tables

TABLE 1 BUILDING 5519 FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS	
Interior	4	4 foot long, 4 bulb florescent fixtures	
Interior	5	8 foot long, 2 bulb florescent fixtures	
Interior	1	4 foot long, 2 bulb florescent fixtures	
Interior	4	4 foot long, 4 bulb florescent fixtures uninstalled	
Interior	320	4 foot long florescent bulbs uninstalled	
Exterior	1	4 foot long, 2 bulb florescent fixtures	
Exterior	1	1 foot round metal halide lamp	
Interior	20	Uninstalled ballasts for florescent light fixtures in box in warehouse-shop area	

Floor Plan (See file 5519FloorPlan.dgn)

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA / AHERA (TSCA Title II) Approved Accreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997

2360 Certificate Number

February 12, 1997
Examination Date

February 11, 1998

expiration Date

William H. Spain - Course Director

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TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

1 April 2002 CESAS-EN-GGe

The Environmental Institute

Tim Jones

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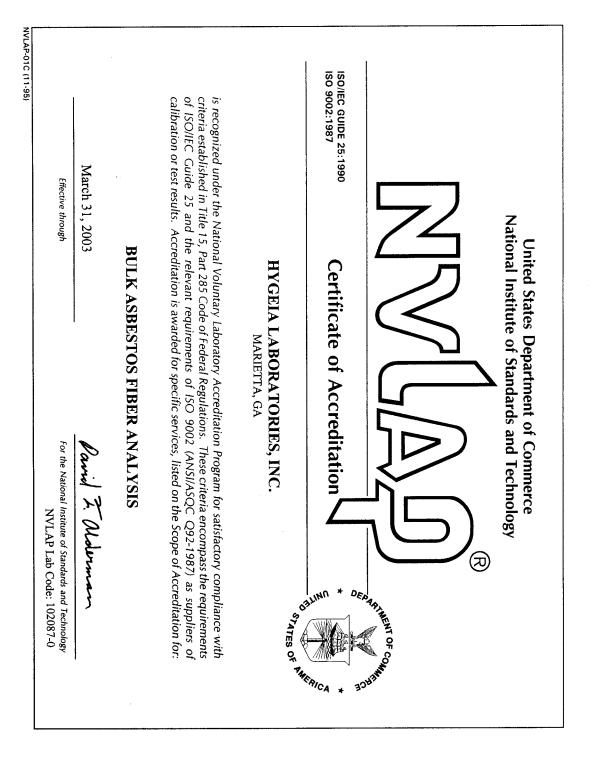
Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

February 26, 2002
Examination Date

February 25, 2003

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CESAS-EN-GGe 1 April 2002



National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990 ISO 9002:1987

Scope of Accreditation

Page: 1 of 1 NVLAP LAB CODE 102087-0

BULK ASBESTOS FIBER ANALYSIS

HYGEIA LABORATORIES, INC.

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Phone: 770-514-6933 Fax: 770-514-6966 E-Mail: call67@atc-enviro.com

NVLAP Code

Designation

18/A01

EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk

Insulation Samples

March 31, 2003

Effective through

Pavid L. Molerman

For the National Institute of Standards and Technology

NVLAP-01S (11-95)



U.S. Army Corps of Engineers Savannah District

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

ASBESTOS SURVEY

BUILDING NO. 5713 FORT BRAGG, NORTH CAROLINA



ASBESTOS INSPECTION REPORT FORT BRAGG, NORTH CAROLINA BUILDING NUMBER 5713

INTRODUCTION

- 1. This report documents the supplemental asbestos inspection and survey of Building No. 5713 at Fort Bragg, North Carolina conducted on March 13 and 14, 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted to confirm and supplement the survey conducted by HUB Testing Laboratories in 1988. The survey was conducted in general accordance with the regulatory guidelines in the Asbestos Hazard Emergency Response Act (AHERA) (40 CFR Part 763 Subpart E Sections 763.80-763.88) and "Guidance for Controlling Asbestos-Containing Materials in Buildings" (Purple Book) (EPA publication number 560/5-85-024). Although not required by the AHERA guidelines, roof and other exterior miscellaneous materials were also inspected and sampled.
- 2. Building No 5713 was built in 1943 and is largely of wood frame construction with a concrete floor slab on grade and wood roof deck. An addition on the north end is of steel frame construction with concrete block walls and a concrete roof deck. The roof is covered by a single layer rubber membrane roof system. Building 5713 originally housed the post laundry, but has been renovated and now contains a smaller laundry area addition on the north end and a parachute rigging operation on the southern end.
- 3. All accessible areas of Building No. 5713 were visually inspected for suspected Asbestos Containing Materials (ACM) by an accredited inspector. Bulk samples of all suspected ACM's were collected. Samples were taken from inconspicuous locations when possible. This report details ACM as identified at the time of inspection only.
- 4. The roof was inspected but no samples were taken. Documentation was located indicating that the old built up roofing membrane was totally removed prior to the installation of the new rubber roof membrane. If older underlying felt and asphalt built up roofing materials are located during demolition they should be analyzed for asbestos prior to removal.
- 5. The bulk samples were analyzed by Hygeia Laboratories, Inc. Hygeia is accredited by the National Voluntary Laboratory Accredited Program (NVLAP Accreditation sponsored by the National Institute of Standards and Technology (NIST)). The samples were analyzed by the accepted method of polarized light microscopy (PLM) using EPA's "Method for the Determination of Asbestos in Bulk Building Materials", EPA/600/R-93/116. Hygeia's analytical report is

included in Appendix 1 and their NVLAP accreditation is in the Certifications section.

6. In compliance with the AHERA regulations, material is considered an Asbestos Containing Material when it contains greater than 1 (one) percent asbestos. Likewise, in this report, any material containing concentrations greater than 1 percent asbestos will be considered "positive". A narrative discussion of the AHERA ACM types (i.e., thermal systems insulation, miscellaneous and surfacing materials) found in Building No. 5713 is included in this report when relevant. Bulk sample information appears on Table 1. Estimated quantities of individual asbestos containing materials appear on Table 2. Material characterization of samples identified as asbestos containing appears as Table 3. The specific location where each bulk sample was obtained is shown on the building floor plans, which appear as Plates. Positive ACM samples are highlighted on the floor plan Plates and, where possible, locations of similar positive ACM are identified. It is reasonable to assume that all materials similar to those testing positive, also contain positive amounts of asbestos and should be treated as such.

DISCUSSION

7. **Thermal Systems Insulation (TSI)** – TSI is insulation material applied to pipes, fittings, boilers, tanks, ducts, or to other interior structural components to prevent heat loss or gain, or water condensation, or for other purposes (Refer to Tables 1-3 and Plates 2, 3 and 5 for specific information and sample locations).

The inspector from HUB Testing Laboratories identified 3" and 4" corrugated paper type insulation on a domestic water pipe in the laundry area as being asbestos containing and this report assumes that material to contain asbestos and locates it on plate 5. Samples were taken for this report from insulation on domestic water piping in the parachute rigging area, insulation on steam piping throughout the building and from insulation on the roof drain piping system in the parachute rigging area. These three systems utilized fiberglass insulation for the pipe runs and some fittings while many of the fittings and patch areas were made of troweled on cementous material. All samples of these insulation components were found to be non-asbestos containing material.

8. **Miscellaneous Materials** – Miscellaneous materials include building material on structural components, structural members or fixtures, such as floor and ceiling tiles, and do not include surfacing or TSI.

In the past, there were a great number of miscellaneous building materials that had asbestos fibers added to them during the manufacturing process to increase durability and fireproofing qualities. The following suspect miscellaneous materials were sampled at Building No. 5713 and found to contain asbestos.

<u>Floor Materials</u> – (Refer to Tables 1-3 and Plates 4 and 5 for specific information and sample locations).

9" X 9" green floor tile located in the laundry office, storerooms and laundry pick up area contains asbestos as does the mastic associated with it.

Summary

- 9. In summary, the following materials in building 5713 were found to contain or are assumed to contain asbestos:
 - 9" X 9" green floor tiles and their mastic contain asbestos (see floor plan for location).

TSI pipe insulation on domestic water piping identified in previous inspection contains asbestos (see floor plan for location).

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Prepared by: _		
	TIMOTHY A. JONES	

Tables

Suspect ACM Samples ACM Quantity Summary Material Characterization and Assessment Table 1 Table 2

Table 3

SUSPECT ACM SAMPLES

			ASBESTOS
FIELD ID	DESCRIPTION	LOCATION	TYPE(%)
5740.4.4		l and marketing and might an area	12% chrysotile in tile , 5% chrysotile in
5713-1-1	9" x 9" green floor tile	Laundry office and pick up area Laundry storage, shipping &	mastic
5713-1-2	Black rolled floor covering	receiving	None
5713-1-3	Gypsum wall board	Laundry storage, shipping & receiving	None
5713-1-4	Felt paper	Behind siding on clear story on roof	None
5713-1-5PT	TSI troweled on pipe tee, 4"	Steam line, parachute rigging area	None
5713-1-6PE	TSI troweled on pipe elbow, 4"	Steam line, parachute rigging area	None
5713-1-7PE	TSI troweled on pipe elbow, 10"	Steam line, parachute rigging area	None
5713-1-8PH	TSI troweled on material at pipe hanger	Steam line, parachute rigging area	None
5713-1-9PE	TSI troweled on pipe elbow, 4"	Steam line, parachute rigging area	None
5713-1-10PR	TSI pipe run, cloth wrapped, 8"	Steam line, parachute rigging area	None
5713-1-11PH		Steam line, parachute rigging area	None
5713-1-12PE	TSI troweled on pipe elbow, 4", cloth wrapped	Steam line, parachute rigging area	<1% chrysotile
5713-1-13PE	TSI troweled on pipe elbow, 8"	Roof drain line, parachute rigging area	<1% chrysotile
5713-1-14	Felt paper	Between exterior siding and wood wall framing studs	None
5713-1-15PR	TSI foil backed fiberglass pipe run	Roof drain line, parachute rigging area	None
5713-1-16PT	TSI troweled on pipe tee, 10"	Roof drain line, parachute rigging area	None
5713-1-17PE	TSI troweled on pipe elbow, 8"	Roof drain line, parachute rigging area	None
5713-1-18PR	TSI foil backed fiberglass pipe run	Roof drain line, parachute rigging area	None
5713-1-19PE	TSI cloth and mastic covering elbow	Abandoned domestic water line, parachute rigging area	None
5713-1-20	Gypsum board ceiling material	Parachute rigging area	None
5713-1-21	Drywall joint compound	Parachute rigging area, east wall	None

SUSPECT ACM SAMPLES

FIELD ID	DESCRIPTION	LOCATION	ASBESTOS TYPE(%)
5713-1-22	Gypsum board wall covering	Parachute rigging area, east wall	None
5713-1-23PC	TSI troweled on pipe cap	Abandoned domestic water line, parachute rigging area	None
5713-1-24PE	TSI troweled on cloth wrapped pipe elbow, 10"	Abandoned domestic water line, parachute rigging area	None
5713-1-25PE	TSI troweled on cloth wrapped pipe elbow, 12"	Abandoned domestic water line, parachute rigging area	None
5713-1-26	Drywall joint compound	Parachute rigging area, west wall	None
5713-1-27	Gypsum board wall covering	Parachute rigging area, west wall	None
5713-1-28	Gypsum board ceiling material	Parachute rigging area	None
5713-1-29	Gypsum board wall covering and joint compound	Parachute rigging office area	None

ACM QUANTITY SUMMARY Ft. Bragg Building 5713

Material Descriptions	Units				Area	Descri	otions				
		Storerooms	Office	Laundry Drop Off Area	Small Restroom	Large Restroom	Lounge				Total
Floor covering 9" X 9" Green Floor Tile	S.F.	300	300	1700							2300
TSI Pipe Run 3" & 4"" OD	L.F.	25			25	80	5				135

MATERIAL CHARACTERIZATION AND ASSESSMENT BUILDING 5713 Ft. BRAGG NORTH CAROLINA

	MATERIAL		CHARACTERIST	ICS		ASSESSMENT
Туре	Description	Asbestos yes/no/ assumed	Quantity (If ACM)	Friable Non- Friable	Condition	Disturbance Potential
						Potential damage from foot
Miscellaneous	9" X 9" floor tile and mastic	Yes 5-12%	2300	Non-friable	Damaged	traffic, moving equipment ect.
TSI	TSI pipe run insulation	Assumed	135 L.F.	Friable	Damaged	Low potential for disturbance

Plates

(See Contract Drawings)

Plate 1	FBr5713a.dgn	Room designations
Plate 2	FBr5713c.dgn	Steam piping TSI sample locations
Plate 3	FBr5713e.dgn	Roof drain piping and abandoned domestic water piping TSI
		sample locations
Plate 4	FB5713d.dgn	Miscellaneous sample locations
Plate 5	FBr5713b.dgn	Asbestos containing materials locations

Appendix 1



HYGEIA LABORATORIES, INC.

US Army Corp of Engineers Environmental & Materials Unit 200 North Cobb Parkway Bldg. 400, Ste. 404 Marietta, GA 30062

Subject:

Hygeia Project Number: A0203011 Client Project Number/Name: 7453 /Fort Bragg - Building 5713

Dear Mr. Tim Jones:

Enclosed are the analytical results of bulk samples submitted by you to this laboratory on 3/18/2002. All analyses were performed by polarized light microscopy (PLM) in accordance with the EPA method as defined in Perkins and Harvey, July 1993, "Methods for the Determination of Asbestos in Bulk Materials" 61pp. (EPA/600/R-93/116). The reported percentages are volume estimates obtained by calibrated visual estimation. The results in this report apply only to the items tested.

The EPA defines an asbestos containing material (ACM) as a material that is reported to contain greater than one percent asbestos. HYGEIA is only responsible for the accuracy of the analytical results provided in this report and cannot be held responsible for the errors resulting from improper sample collection techniques. This report may not be used to claim product endorsement by NVLAP or any other U.S. Government agency.

For nonhomogeneous samples, each layer was analyzed separately and the results combined to form the reported value except where otherwise noted. Vinyl floor tile samples with negative results by PLM should be submitted for confirmation by transmission electron microscopy (TEM). Friable samples containing less than 10% asbestos as determined by PLM may be resubmitted for point counting at your discretion.

Thank you for using our analytical services. HYGEIA Laboratories has been NVLAP accredited since 1988. Our current NVLAP code is 102087-0. We will keep a copy of this report on file for three years. We will dispose of your samples in 60 days unless you request that we return them. This report my be reproduced only in its entirety with the consent of Hygeia Laboratories, Inc. If you have any questions, please call us at (770) - 514-6933.

Clayton Call

Clayton all Asbestos Laboratory Manager

> NVLAP# Texas Dept. of Health #

102087-0

Commonwealth of Virginia # 3333-000210

3/25/2002

An ATC Group Services Inc. Company -

Hygeia	Hygeia Laboratories Inc.														
Marie (77 Hygeia Projec Client Project	Harietta, GA 30066 Marietta, GA 30066 (770) 514-6933 Hygeia Project Number: A0203011 Client Project Number/Name: 7453 / Fort Bragg - Building 5713	3011 7453 / Fo	ort Bragg	- Building	5713	PLM A	nalysis S	PLM Analysis Summary			Analy	Page: 1 of 6 rzed: 3/19/200	Page: 1 of 6 Analyzed: 3/19/2002 by WAS	WAS	
Sample ID	6	Sample	Sample Description			Asbes	Asbestos Percent	ä		Oth O	Other Fibers		Non -	Non - Fibers	
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro.	An.	I/A	Cell.	Glass	일	B/F	ONE	
5713-1-1	A0203011-01	Green	Cons.	₹	12%								88%		
Comment: Til	Comment: Tile: 12% Chrysotile. Mastic: 5% Chrysotile.	le. Mastic	: 5% Ch	ysotile.											
Client #	Hygeia #	Color	Texture	Homog.	EFF.	B	CE .	₽	T/A	Cell.	Glass	R	B/F	ONE	
5713-1-2	A0203011-02	Black	Gummy	š				473		10%			%06		
Comment: No	Comment: No Asbestos Detected.	Ä													
Client #	Hygeia #	Color	Texture	Homog.	얁	Am.	Cro.	<u>A</u>	MΙ	<u>Cell</u>	Glass	R	<u>B/F</u>	ONF	
5713-1-3	A0203011-03	White	Cons	š						20%			80%		
Comment: No	Comment: No Asbestos Detected.	ř													
Client #	Hygeia #	Color	<u>Texture</u>	Homog.			Cro.	<u>A</u>	T/A	<u>[]</u>	Glass	R	B/F	ONF	
5713-1-4	A0203011-04	Brown	Fibrous	₹						80%			20%		
Comment: No	Comment: No Asbestos Detected.	ř													
Client #	Hygeia #	Color	Texture	Homog.	E.	Am.	Cro.	An.	ΜI	<u>[6</u>	Glass	R	B/F	ONF	
5713-1-5PT	A0203011-05	Tan	Fibrous	Yes						30%	40%		30%		•
Comment: No	Comment: No Asbestos Detected.	ă.													

Client Project Number/Name: 7453 / Fort Bragg - Building 5713 Sample ID Sample Description	Client #	5713-1-6PE	Comment: No Asbestos Detected.	Client #	5713-1-7PE	Comment: No Asbestos Detected.	Client #	5713-1-8PH	Comment: No Asbestos Detected.	Client #	5713-1-9PE	Comment: No Asbestos Detected.		Client #
lumber/Name: ID	Hygeia #	A0203011-06	Asbestos Detect	Hygeia #	A0203011-07	Asbestos Detecti	Hygeia #	A0203011-08	Asbestos Detecto	Hygeia #	A0203011-09	sbestos Detecte	Hygeia#	
7453 / Fi	Color	Gray	.	Color	Gray	.	Color	Gray	ř	Color	Gray		Color	4
7453 / Fort Bragg - Buil	Texture	Fibrous		Texture	Fibrous		Texture	Fibrous		Lexture	Fibrous		Texture	
- Building	Hornog.	¥8		Нотод	š		Homog.	á		Homog	ř		Homog.	3
5713	Chr.			E .						Chr.			卧	
Asbes	Am.			3		20 20 20 20 20 20 20 20 20 20 20 20 20 2	Am.						₿	
Asbestos Percent	Cro.			6			Cro.			C)			윩	
ž	<u>An</u>			₿			A			<u>An</u>			₿.	
	I/A			T _M			<u>A/I</u>			IIA			K	
9	<u>Cell</u>			Cell			<u>[]</u>	30%		<u>Cell</u>	30%		<u>Cell</u>	
Analy Other Fibers	Glass	40%		Glasse	40%		Glass	40%		Glass	40%		Glass	95%
rage: 2 or 6 /zed: 3/19/200	P			K III			ę			Ŕ			유	
Fage: 2 Or o Analyzed: 3/19/2002 by WAS Tibers Non - Fiber	BK.	809		B/F	60%		B/F	30%		BVF	30%		B/F	5%
002 by WAS	ONF			ONF			ONF			ONF			ONF	

Client Project	nygeia Project Number: A0203011 Client Project Number:Name: 7453 / Earl Breag - Building 5713)3011 7452 / ⊑	D	D.iiking	F743							Page: 3 of 6	of 6	; ;
Samula II	5		, Circle	Guinaling	2		1				Analya	zea: 3/15	Analyzed: 3/19/2002 by WAS	WAS
1000		Carrion	Cample Description			ASDES	Aspestos Percent	Jul.		Cin	Other Fibers		Non -	Non - Fibers
Client #	Hygeia #	Color	Texture	Hornog.	Chr.	Am.	Cro.	<u>An</u>	T/A	<u>Sel</u>	Glass	P	B/F	ONF
5713-1-11PH	A0203011-11	Gray	Fibrous	š							40%		% %	
Comment: No	Comment: No Asbestos Detected.	ř												
Client #	Hygeia#	Color	Texture	Homog.	C)	Am.	Cite	₿	T/A	Cell.	Glass	R	B/F	ONF
5713-1-12PE	A0203011-12	Green	Fibrous	š	% ₹						40%		80%	
Comment:														
Client #	Hygeia #	Color	Texture	Hornog.	딾	An.	Cing .	<u>A</u> n.	T/A	<u>Cell</u>	Glass	R	PF.	ONF
5713-1-13PE	A0203011-13	Gray	Fibrous	ś	^1%						40%		%0 8	
Comment:												THE STATE OF THE S		
Client #	Hygeia #	Color	Texture	Homog.	₽	B	Cip.	An.	T/A	<u>Cell.</u>	Glass	P	딹	ONF
5713-1-14	A0203011-14	Brown	Fibrous	8						70%			30%	
Comment: No	Comment: No Asbestos Detected,	f												
												enti-		
Client #	Hygeia #	Color	Texture	Hornog,	PF.	B	E	₽	¥	<u>[6</u>	Glass	R	B/F	ONF
5713-1-15PR	A0203011-15	Gray	Fibrous	Yes							80%		20%	
Comment: No	Comment: No Asbestos Detected.	ę.												

Client Project	Client Project Number/Name: 7453 / Fort Bragg - Building 5713	7453 / F	ort Bragg	- Building	5713						Analy	rage. + or o	Analyzed: 3/19/2002 by WAS	WAS
Sample ID	e do	Sample	Sample Description	tion		Asbes	Asbestos Percent	ent		Oth	Other Fibers		Non .	Non - Fibers
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am	Cro.	An.	T//A	Cell.	Glass	엳	B/F	ONE
5713-1-16PT	A0203011-16	Gray	Fibrous	₹							40%		% 09	
Comment: No	Comment: No Asbestos Detected.	Ě												
												en Mer		
Client #	Hygeia#	Color	Texture	Hornog.	E E	B	()	₽	T/A	Cell.	Glass	엁	B)/F	ONF
5713-1-17PE	A0203011-17	Gray	Fibrous	₹							40%		% 09	
Comment: No	Comment: No Ashestos Detected.	•												
Client #	Hygeia#	Color	Texture	Homog.	Chr.	Am.	Cro.	₽	T/A	<u>e</u>	Glass	P	B/F	ONF
5713-1-18PR	A0203011-18	M	Fibrous	á							80%		20%	
Comment: No	Comment: No Asbestos Detected.	•										1944 1944 1944 1944		
Client #	Hygeia #	<u>S</u>	Texture	Homog.	C T		C T	}	1 M	<u>₽</u>	Glass	9 1	P T	O N
5713-1-19PE	A0203011-19	Š.	Coms.	ă									100%	
Comment: No	Comment: No Asbestos Detected.	•												
Client #	Hygeia #	Color	Texture	Hornog.	EFF.	B	<u>Cip.</u>	B	T/A	<u>₹</u>	Glass	R	B/F	ONE
5713-1-20	A0203011-20	White	Cons.	ĕ						30%			70%	
Comment: No	Comment: No Asbestos Detected.	ŗ.												

			Series 110	S							Allaiy.	Analyzed: 3/19/2002 by WAS	"ZUUZ WY	_
Sample ID	e D	Sample	Sample Description	tion		Asbes	Asbestos Percent	ent		Oth	Other Fibers		Non - Fibers	
Client #	Hygeia #	Color	Texture	Hormog.	Chr.	Am.	Cro.	An.	T/A	Cell.	Glass	lg l	B/F	- 1
5713-1-21	A0203011-21	White	Cons.	š						20%			80%	
Comment: No	Comment: No Asbestos Detected.	Î										19191 1930		
Client #	Hygeia #	Color	Texture	Homog.	CH.	B	(E)	₽	ΑΙΤ	Cell.	Glass	R	B/F	
5713-1-22	A0203011-22	White	Cons.	Y8									100%	
Comment: No	Comment: No Asbestos Detected.				1 15 14 14									
Client #	Hygeia #	Color	Texture	Homog.	Chr.	Am.	Cro	<u>A</u>	I/A	<u>Cel</u>	Glass	P	B/F	
5713-1-23PC	A0203011-23	Gray	Fibrous	š			Å		ð. 1889		40%		60%	
Comment: No	Comment: No Asbestos Detected.													
Client #	Hygeia #	Color	Texture	Homog.	P	B	je je	<u>A</u>	ĭ≱	Cell	Glass	DF	B/F	
5713-1-24PE	A0203011-24	O ag	Fibrous	₹						į			100%	
Comment: No	Comment: No Asbestos Detected.											300 A		
Client #	Hygeia #	Color	Texture	Homog.	돧	Am	Cr _E	B	II.	<u>[e</u>	Glass	R	B/F	
5713-1-25PE	A0203011-25	Gray	Fibrous	8							30%		70%	
Comment: No	Comment: No Asbestos Detected.	:-												

abbreviations: Chr. = chrysotile Am. = amosite Cro. = crocidolite An. = anthophyl T/A = tremolite/	Comment: No	5713-1-29	Client #	Comment: No	5713-1-28	Client #	Comment: No	5713-1-27	Client #	Comment: No	5713-1-26	Client #	Sample ID	Hygeia Projec Client Project
eviations: = chrysotile = amosite = crocidolite = anthophyllite = tremolite/actinolite	Comment: No Asbestos Detected.	A0203011-29	Hygeia #	Comment: No Asbestos Detected.	A0203011-28	Hygeia #	Comment: No Asbestos Detected.	A0203011-27	Hygeia #	Comment: No Asbestos Detected	A0203011-26	Hygeia #	e ID	Hygeia Project Number: A0203011 Client Project Number/Name: 7453 / Fort Bragg - Building 5713
	À	White	Color	Ě	White	Color	ř	White	Color	L	White	Color	Sample)3011 7453 / Fo
cell glass glass syn sty		Cons.	Texture		Come	Texture		Cons.	Texture		Cons.	Texture	Sample Description	ort Bragg
= cellulose = fibrous glass = synthetic = styrene foam = detected		₹	Homog.		8	Hornog.		No	Hornog		8	Homog.	tion	- Building
se glass ic ic foam						Chr.			Chr.			Chr.		5713
per ver Mf B/F			Am.			<u>Am.</u>			þ			Am.	Asbes	
= perlite = vermiculite = Mineral filler = Binder / filler = No asbestos detected			<u>පි</u>			Cro.			ig ig			Cro.	Asbestos Percent	
; culite al filler r / filler estos de			<u>An</u>			<u> </u>			<u>A</u>			<u>An</u>	ent	
tected			T/A			T/Α			T/A			T/A		
OF ONF Cons		40%	Cell.		20%	<u>e</u>			Cell			Cell.	Oth	
8 T			Glass			Glass			Glass			Glass	Other Fibers	Analy
Other FibersOther Non-FibersConsolidated			R			R			R			윾		Page: 6 of 6 /zed: 3/19/200
s Fibers ed		60%	맭		80%	<u>B/F</u>		100%	B/F		100%	B/F	Non	Page: 6 of 6 Analyzed: 3/19/2002 by WAS
			ONF			ONE			ON NF			ONE	Non - Fibers	y WAS
•														

Chain of Custody

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	Ft. Bragg Bldg. 5713	EMU Job No.: 7453
Samplers:	Tim Jones, Jack Ford	Analysis: PLM

DATE	FIELD ID	EMU ID	COMPONENTS / NOTES
3/13/02	5713.1.1	43403	Green 9X9 floor tile
3/13/02	5713.1.2	43404	Black rolled floor covering
3/13/02	5713.1.3	40405	Gypsum board wall covering
3/13/02	5713.1.4	43406	Felt paper
3/14/02	5713.1.5PT	43407	TSI troweled tee
3/14/02	5713.1.6PE	43408	TSI troweled elbow
3/14/02	5713.1.7PE	43409	TSI troweled elbow
3/14/02	5713.1.8PH	43410	TSI troweled hanger
3/14/02	5713.1.9PE	43411	TSI troweled elbow
3/14/02	5713.1.10PR	43412	TSI cloth wrapped pipe run
3/14/02	5713.1.11PH	43413	TSI troweled hanger
3/14/02	5713.1.12PE	43414	TSI troweled elbow
3/14/02	5713.1.13PE	43415	TSI troweled elbow
3/14/02	5713.1.14	43416	Felt paper
3/14/02	5713.1.15PR	43417	TSI foil backed pipe run
3/14/02	5713.1.16PT	43418	TSI troweled tee
3/14/02	5713.1.17PE	43419	TSI troweled elbow
3/14/02	5713.1.18PR	43420	TSI foil backed pipe run
3/14/02	5713.1.19PE	43421	TSI white cloth and mastic elbow covering
3/14/02	5713.1.20	43422	Gypsum board ceiling covering
3/14/02	5713.1.21	43423	Drywall joint compound
3/14/02	5713.1.22	43424	Gypsum board wall covering

Relinquished By	Date	Time	\ R€	cęived By	Date	Time
Tim So-	3-18-02	1205	X			
0						

Comments:		

ASBESTOS CHAIN OF CUSTODY - US ARMY CORPS OF ENGINEERS

Project:	Ft. Bragg Bldg. 5713	EMU Job No.: 7453
Samplers:	Tim Jones, Jack Ford	Analysis: PLM

FIELD ID	EMU ID	COMPONENTS / NOTES
5713.1.23PC	43425	TSI troweled end cap
5713.1.24PE	43426	TSI troweled elbow
5713.1.25PE	43427	TSI troweled elbow
5713.1.26	43428	Drywall joint compound
5713.1.27	43429	Gypsum board wall covering
5713.1.28	43430	Gypsum board ceiling covering
5713.1.29	43431	Gypsum board wall covering and joint mud
	*	
	-	
	5713.1.23PC 5713.1.24PE 5713.1.25PE 5713.1.26 5713.1.27 5713.1.28	5713.1.23PC 43425 5713.1.24PE 43426 5713.1.25PE 43427 5713.1.26 43428 5713.1.27 43429 5713.1.28 43430

Relinquished By	Date	Time	Received By	Date	Time
Tim for	3-18-02	1205			
			100		

Comments:	

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA / AHERA (TSCA Title II) Approved Accreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997

2360

February 12, 1997
Examination Date

<u>February 11, 1998</u>

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation and NESHAP Regulations Training

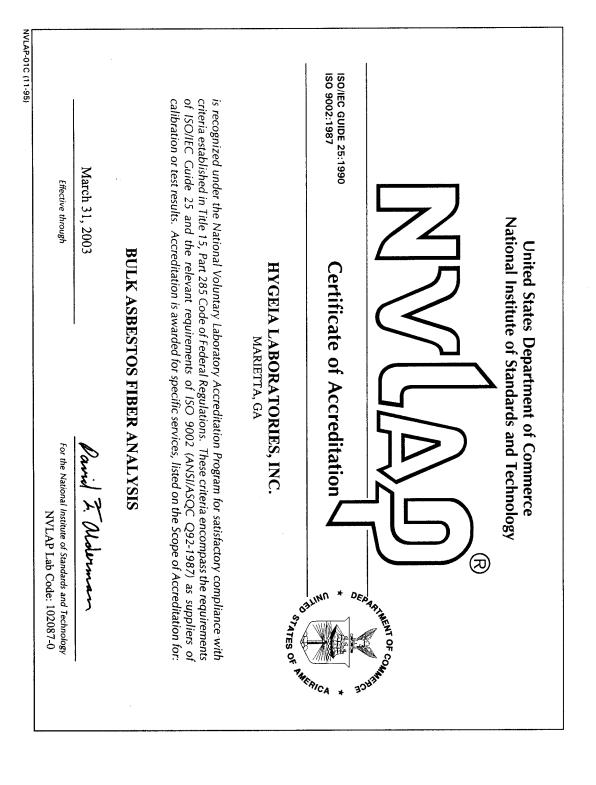
Asbestos in Buildings: Inspector Refresher

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

February 26, 2002
Course Date

February 26, 2002
Examination Date

February 25, 2003





National Voluntary Laboratory Accreditation Program

NVLAP LAB CODE 102087-0

ISO/IEC GUIDE 25:1990 ISO 9002:1987

Scope of Accreditation

Page: 1 of 1

BULK ASBESTOS FIBER ANALYSIS

HYGEIA LABORATORIES, INC.

1300 Williams Drive, Suite A Marietta, GA 30066-6299 Mr. Clayton Call

Phone: 770-514-6933 Fax: 770-514-6966 E-Mail: call67@atc-enviro.com

NVLAP Code

Designation

18/A01

EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk

Insulation Samples

March 31, 2003

Effective through

pava .

For the National Institute of Standards and Technology

NVLAP-01S (11-95)

CESAS-EN-GG 09 JULY, 2002 Fife/maf/5671

MEMORANDUM THRU: EN-GG (O'Kelley)

EN-G (Phillips)

FOR: PM-MB (Grainger)

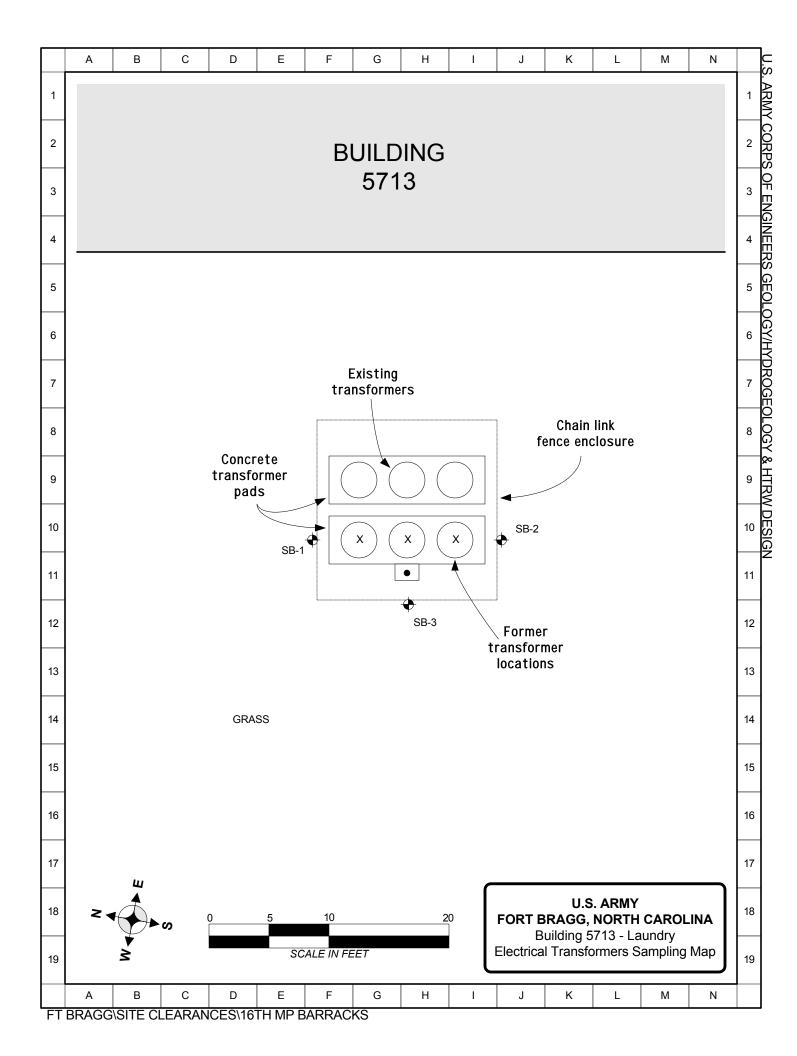
SUBJECT: 16th Military Police Barracks Brigade Complex Transformer Pad PCB Investigation, Old Post Laundry (Bldg. 5713) at Fort Bragg, North Carolina.

Attached are the analytical results for the environmental sampling performed on 18 APR 02 at the subject site. The samples were retrieved utilizing a hand auger. The attachments include a site map with the sampling points indicated and a copy of the laboratory report.

If there are any questions concerning this project, please contact Martin Fife, CESAS EN-GG (912-652-5671).

Martin A. Fife, P.G. Project Scientist Geology/Hydrogeology and HTRW Design Section

File





ACCURA ANALYTICAL LABORATORY

6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800 FL Certification #E87429 NC Certification #483 SC Certification #98015 USACE-MRD Approved

Case Narrative

AAL Work Order # 1883

Client Project: Ft. Bragg, NC; Bldg. 5713 / Credit Card Purchase

The following items were noted concerning this project:

- 1. Accura Analytical Laboratory certifies that the results meet all requirements of the NELAC Standards.
- 2. The data package includes 1 page case narrative and 13 summary report pages.
- 3. The samples were received at 2° C.
- 4. The "J" qualifiers noted in these results indicate estimated concentrations that were above the method detection limits, but below the reporting limits.
- 5. The soil sample results are reported on a dry weight basis.
- 6. The following spike recoveries were outside the method specified limits due to possible matrix interference and/or sample heterogeneity:

PCB-SW-846-8082

Matrix Spike - Arochlor 1016 Arochlor 1260

Matrix Spike Duplicate - Arochlor 1016 Arochlor 1260

Note: These samples were from AAL batch QC and not from this site.

7. The Method Blanks were less ½ than the reporting limit for the all analyses submitted for this project.

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A2LA Accredited-ID: 120261 ?Certificate #-1365.1?Exp 7/31/02 Effective 8/14/00?Scope: Testing Technologies

Potable & Non-potable Water-Solid/Hazardous Waste

Analytical Report for

US Army Corp of Engrs, Savann.

Project Name: Fort Bragg, NC Bldg. 5713

Project Manager: Mark Harvison

Lab. Work Order #: 1883 Method: SW8082



April 26, 2002

ACCURA Analytical Laboratories, Inc. - 6017 Financial Drive - Norcross, GA 30071 Phone: 770-449-8800 Fax: 770-449-5477



Summary of Analytical Results

Client ID: Prep Method: SW3545 Analytical Method: SW8082 Sample Depth: Prep Date: 04/22/02 Date Analyzed: 04/23/02 Sample ID 11550 BLK Prep Time: 10:30 Time Analyzed: 01:10

Matrix: SOIL Prep Chemist: Evie Goldberg Analyst: Thomas Gatch

Date Collected: Date Received:

PCBs by SW8082	Result	Rep Limit	Units	Quali	ier Dil.Fac	ctor
Aroclor-1016	<r.l.< td=""><td>17</td><td>ug/kg</td><td>U</td><td>1</td><td></td></r.l.<>	17	ug/kg	U	1	
Aroclor-1221	<r.l.< td=""><td>17</td><td>ug/kg</td><td>U</td><td>1</td><td></td></r.l.<>	17	ug/kg	U	1	
Aroclor-1232	<r.l.< td=""><td>17</td><td>ug/kg</td><td>U</td><td>1</td><td></td></r.l.<>	17	ug/kg	U	1	
Aroclor-1242	<r.l.< td=""><td>17</td><td>ug/kg</td><td>U</td><td>1</td><td></td></r.l.<>	17	ug/kg	U	1	
Aroclor-1248	<r.l.< td=""><td>17</td><td>ug/kg</td><td>U</td><td>1</td><td></td></r.l.<>	17	ug/kg	U	1	
Aroclor-1254	<r.l.< td=""><td>17</td><td>ug/kg</td><td>U</td><td>1</td><td></td></r.l.<>	17	ug/kg	U	1	
Aroclor-1260	<r.l.< td=""><td>17</td><td>ug/kg</td><td>U</td><td>1</td><td></td></r.l.<>	17	ug/kg	U	1	



Summary of Analytical Results

Client ID: FB-5713-SB1 Prep Method: SW3545 Analytical Method: SW8082 Sample Depth: Prep Date: 04/22/02 Date Analyzed: 04/23/02 Sample ID: 1883-001 Prep Time: 10:30 Time Analyzed: 02:18

Sample ID 1883-001 Prep Time: 10:30 Time Analyzed: 02:18

Matrix: SOIL Prep Chemist: Evie Goldberg Analyst: Thomas Gatch

Date Collected: 04/18/2002 09:10 Date Received: 04/19/2002 07:25

PCBs by SW8082	Result	Rep Limit	Units	Qualifie	r Dil.Factor
Aroclor-1016	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1221	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1232	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1242	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1248	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1254	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1260	18	18	ug/kg		1



Client ID: FB-5713-SB2 Prep Method: SW3545 Analytical Method: SW8082 Sample Depth: Prep Date: 04/22/02 Date Analyzed: 04/23/02 Sample ID: 1883-002 Prep Time: 10:30 Time Analyzed: 02:51

Sample ID 1883-002 Prep Time: 10:30 Time Analyzed: 02:51

Matrix: SOIL Prep Chemist: Evie Goldberg Analyst: Thomas Gatch

Date Collected: 04/18/2002 09:25 Date Received: 04/19/2002 07:25

PCBs by SW8082	Result	Rep Limit	Units	Qualifi	er Dil.Factor
Aroclor-1016	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1221	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1232	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1242	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1248	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1254	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1260	14	18	ug/kg	J	1



Client ID: FB-5713-SB3 Prep Method: SW3545 Analytical Method: SW8082
Sample Depth: Prep Date: 04/22/02 Date Analyzed: 04/23/02
Sample ID: 1882-003 Prep Times 10-20 Times Analyzed: 02/25

Sample ID 1883-003 Prep Time: 10:30 Time Analyzed: 03:25

Matrix: SOIL Prep Chemist: Evie Goldberg Analyst: Thomas Gatch

Date Collected: 04/18/2002 09:40 Date Received: 04/19/2002 07:25

PCBs by SW8082	Result	Rep Limit	Units	Qualifier	Dil.Factor
Aroclor-1016	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1221	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1232	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1242	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1248	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1254	<r.l.< td=""><td>18</td><td>ug/kg</td><td>U</td><td>1</td></r.l.<>	18	ug/kg	U	1
Aroclor-1260	6.4	18	ug/kg	J	1



Analytical Data Package For: US Army Corp of Engrs, Savann.

Project Name: Fort Bragg, NC Bldg. 5713

Client ID	Depth	Accura ID	Mtx	Prep#	Anal #	Received	Collection	Prep Date	Analysis
FB-5713-SB1	188	83-001	S	11550	11820	04/19/02	04/18/02	04/22/02	04/23/02
FB-5713-SB2	183	83-002	S	11550	11820	04/19/02	04/18/02	04/22/02	04/23/02
FB-5713-SB3	183	83-003	S	11550	11820	04/19/02	04/18/02	04/22/02	04/23/02
	11:	550 BLK	S	11550	11820			04/22/02	04/23/02
	11:	550 BKS	S	11550	11820			04/22/02	04/23/02

Analytical Report for

US Army Corp of Engrs, Savann.

Project Name: Fort Bragg, NC Bldg. 5713

Project Manager: Mark Harvison

Lab. Work Order #: 1883 Method: CLP_SOLIDS



April 26, 2002

ACCURA Analytical Laboratories, Inc. - 6017 Financial Drive - Norcross, GA 30071 Phone: 770-449-8800 Fax: 770-449-5477



Client ID: FB-5713-SB1 Prep Method: CLP_SOLIDS Analytical Method: CLP_SOLIDS Sample Depth: Prep Date: 04/23/02 Date Analyzed: 04/23/02

Sample ID 1883-001 Prep Time: 08:15 Date Analyzed: 04/23/0.

Matrix: SOIL Prep Chemist: Kimbela Cameron Analyst: Kimbela Cameron

Date Collected: 04/18/2002 09:10 Date Received: 04/19/2002 07:25

Percent Solids by CLP	Result	Rep Limit	Units	Qualifier Dil.Factor
Percent Solids	95	1	%	1



Client ID: FB-5713-SB2 Prep Method: CLP_SOLIDS Analytical Method: CLP_SOLIDS Sample Depth: Prep Date: 04/23/02 Date Analyzed: 04/23/02

Sample ID 1883-002 Prep Time: 08:15 Time Analyzed: 08:15

Matrix: SOIL Prep Chemist: Kimbela Cameron Analyst: Kimbela Cameron

Date Collected: 04/18/2002 09:25 Date Received: 04/19/2002 07:25

Percent Solids by CLP	Result	Rep Limit	Units	Qualifier Dil.Factor
Percent Solids	94	1	%	1



Client ID: FB-5713-SB3 Prep Method: CLP_SOLIDS Analytical Method: CLP_SOLIDS Sample Depth: Prep Date: 04/23/02 Date Analyzed: 04/23/02

Sample ID 1883-003 Prep Time: 08:15 Time Analyzed: 08:15

Matrix: SOIL Prep Chemist: Kimbela Cameron Analyst: Kimbela Cameron

Date Collected: 04/18/2002 09:40 Date Received: 04/19/2002 07:25

Percent Solids by CLP	Result	Rep Limit	Units	Qualifier Dil.Factor
Percent Solids	94	1	%	1



Analytical Data Package For: US Army Corp of Engrs, Savann.

Project Name: Fort Bragg, NC Bldg. 5713

Client ID	Depth A	Accura ID	Mtx	Prep#	Anal #	Received	Collection	Prep Date Analysis
FB-5713-SB1	1883-0	001	S	11797	11797	04/19/02	04/18/02	04/23/02
FB-5713-SB2	1883-0	002	S	11797	11797	04/19/02	04/18/02	04/23/02
FB-5713-SB3	1883-0	003	S	11797	11797	04/19/02	04/18/02	04/23/02



Form 2 - Surrogate Recoveries

Project Name: Fort Bragg, NC Bldg. 5713

Report Date: 04/26/02 15:26

102

90

SURROGATE RECOVERY STUDY

59-175

59-175

Work Order #: 1883

Decachlorobiphenyl

Decachlorobiphenyl

Sample: 11550 BKS / BKS **Lab Batch #:** 11820

Project ID: Credit Card Purchase Matrix: SOIL Batch:

16.7

16.7

Units: ug/kg Client-Id:	SU	SURROGATE RECOVERY STUDY					
PCBs by SW8082	Amount Found	True Amount	Recovery	Control Limits	Flags		
Analytes	[A]	[B]	%R [D]	%R			

16.9

15.1

Matrix: SOIL Lab Batch #: 11820 Sample: 11550 BLK / BLK Batch: 1

SURROGATE RECOVERY STUDY Units: ug/kg Client-Id: Amount True Control PCBs by SW8082 **Found** Amount Recovery Limits **Flags** %R %R [B] [A] **Analytes** [D]

Matrix: SOIL **Lab Batch #:** 11820 **Sample:** 1883-001 / SMP Batch:

SURROGATE RECOVERY STUDY Units: ug/kg Client-Id: FB-5713-SB1 True Amount Control PCBs by SW8082 **Found** Amount Recovery Limits Flags [B] %R [A] %R **Analytes** [D] Decachlorobiphenyl 16.7 16.7 100 19-203

Matrix: SOIL **Sample:** 1883-002 / SMP Lab Batch #: 11820 Batch: 1

Client-Id: FB-5713-SB2

Units: ug/kg Amount True Control PCBs by SW8082 Flags Limits Found Amount Recovery [B] %R [A] **Analytes** [D] Decachlorobiphenyl 16.9 16.6 102 19-203

Matrix: SOIL **Lab Batch #:** 11820 **Sample:** 1883-003 / SMP Batch: 1

SURROGATE RECOVERY STUDY Units: ug/kg Client-Id: FB-5713-SB3 True PCBs by SW8082 Amount Control **Found** Amount Recovery Limits Flags [A] [B] %R %R **Analytes** [D] Decachlorobiphenyl 16.9 16.7 102 19-203

^{**} Surrogates outside limits; data and surrogates confirmed by reanalysis

^{***} Poor recoveries due to dilution



U.S. Army Corps of Engineers Savannah District

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

HAZARDOUS MATERIAL REPORT

BUILDING NO. 5713 FORT BRAGG, NORTH CAROLINA



CESAS-EN-GGe 28 March 2002

HAZARDOUS MATERIAL REPORT Ft. BRAGG, NORTH CAROLINA BUILDING 5713

INTRODUCTION

- 1. This report documents the hazardous material survey of Building No. 5713 at Ft. Bragg, North Carolina conducted on 14 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District
- 2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials excluding asbestos, which is handled under separate cover.
- 3. Building No 5713 was built in 1943 and is largely of wood frame construction with a concrete floor slab on grade and wood roof deck. An addition on the north end is of steel frame construction with concrete block walls and a concrete roof deck. The roof is covered by a single layer rubber membrane roof system. No physical sampling of suspect hazardous components was performed, only a visual counting was performed.

SUMMARY

- 4. The florescent and metal halide light count results are presented in Table 1.
- 5. Inspection of the building turned up lead in the plumbing drain and vent piping systems. Results are presented in Table 2.
- 6. Four mercury-containing thermostats were located in the laundry shipping and receiving area mounted to columns in the center of the area.
- 7. An above ground propane gas storage tank is located on the west side of the building.

8.	 12 window air conditioning units sho prior to demolition. 	uld be removed and refrigerant recovered
	Prepa	red by:TIMOTHY A. JONES

CESAS-EN-GGe 28 March 2002

Tables

TABLE 1 Ft. BRAGG BLDG. 5713 FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS
Interior	136	2 foot round metal halide fixtures
Interior	8	Battery backup emergency lights
Interior	132	4 foot long, 2 bulb florescent fixtures
Interior	25	4 foot long, 4 bulb florescent fixtures
Interior	50	8 foot long, 2 bulb florescent fixtures
Exterior	16	1 foot square metal halide lights

TABLE 2 Ft. BRAGG BLDG. 5713 LEAD BUILDING COMPONENTS

BUILDING COMPONENT	DESCRIPTION	LOCATION	ESTIMATED NUMBER
Hot poured lead pipe ioint	In plumbing drainage, waste and	Restrooms and under slab and	300-400
Joint	vent piping	roof drain piping	

CESAS-EN-GGe 28 March 2002

Floor Plan (See 5713FloorPlan.dgn)



U.S. Army Corps of Engineers Savannah District

U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

BUILDING NUMBER 5807 FORT BRAGG, NORTH CAROLINA



HAZARDOUS BUILDING MATERIAL REPORT Ft. BRAGG, NORTH CAROLINA BUILDING 5807

INTRODUCTION

- 1. This report documents the hazardous building material survey of Building 5807 associated with the 16th MP Brigade complex project at Ft. Bragg, North Carolina conducted on 13 March 2002 by USACE Savannah District employees Tim Jones and Jack Ford. This survey was conducted in general accordance with the Statement of Services developed by Ray Willingham, USACE Savannah District.
- 2. The survey consists of a count of florescent and metal halide lights, a search for mercury containing equipment, a search for lead building components, a search for evidence of past or present underground storage tanks and a search for any other hazardous building materials.
- 3. Building 5807 was reportedly built in 1931 and is used as a general storage building. It is of steel construction with a concrete floor slab. No physical samples of suspect hazardous components were taken, only a visual counting was performed.

SUMMARY

- 4. The florescent and metal halide light count results are presented in Table 1.
- 5. No lead building components were located in Building 5807
- 6. No mercury-containing equipment was located in Building 5807
- 7. An inspection of Building 5807 turned up no suspect asbestos containing building material and no samples were taken.
- 8. One 55 gallon drum of Trichloroethylene stored in an over-pack safety drum was located inside Building 5807.

CESAS-EN-GGe			1 April 2002
	Prepared by: _	TIMOTHY A. JONES	

Tables

TABLE 1 BUILDING 5807 FLORESCENT LIGHT FIXTURES

AREA IDENTIFICATION	# & TYPE LIGHTS PRESENT	DESCRIPTION OF LIGHTS			
Interior	14	8 foot long with 4 each 4 foot long bulbs florescent fixtures 2 foot round metal halide fixtures loose on ground by door			
Exterior	2				

Certifications

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA / AHERA (TSCA Title II) Approved Accreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspection and Assessment

February 10-12, 1997

2360
Certificate Number

February 12, 1997
Examination Date

February 11, 1998

voiration Date

William H. Spain - Course Director

V // M N/9

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600

1 April 2002 CESAS-EN-GGe

The Environmental Institute

Tim Jones

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

February 26, 2002
Course Date

February 26, 2002
Examination Date

February 25, 2003

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600



U.S. Army Corps of Engineers Savannah District

> U.S. ARMY CORPS OF ENGINEERS ENVIRONMENTAL & MATERIALS UNIT 200 NORTH COBB PARKWAY BUILDING 400, SUITE 404 MARIETTA, GA 30062

HAZARDOUS BUILDING MATERIAL REPORT

INCLUDING ASBESTOS

UN-NUMBERED STORAGE BUILDING FORT BRAGG, NORTH CAROLINA

*4

DELETED

(This building has been demolished)



Asbestos Inspection Report Fort Bragg, North Carolina

Building No. 2-6105

Summary

Building No. 2-6105 is used as a warehouse. The building is of block construction with a wood rafter, shingled roof and a concrete floor. Suspect material included the roofing material and window putty. No asbestos containing material was found.

Homogeneous Area: H01 Window Putty

Homogeneous area H01 is the window putty used on the windows of the building.

Sample No.	Location	% Asbestos/ Type		
2-6105-0101	Window Frame	None Detected		
2-6105-0102	Window Frame	None Detected		
2-6105-0103	Window Frame	None Detected		

Homogeneous Area:

H02 Roofing Materials

Homogeneous area H02 is the roof shingles and felt material used on the roof of the building.

Sample No.	Location	% Asbestos/ Type		
2-6105-0204	Roof	None Detected		
2-6105-0205	Roof	None Detected		
2-6105-0206	Roof	None Detected		

ACSTRACT NJ PROC 609-858-4800 90

Procataway, NJ

Carte Place, NT 516-997-7251 Manhattan, NY 212-290-0052

Seattle, WA

Ann Arbor, MI 313-668-6810 3an Mateo, CA 415-570-5401 Smyrna, 6A 404-333-6066 Greensbore, N 910-297-1487 Houston, TX 713-686-3635



Alpha Environmental Sciences 400 Dellwood Rd. Bldg.6A Ste 2

P.O.Box 31 Waynesville, NC 28786 Thursday, January 16, 1997

Ref Number: NC97148

POLARIZED LIGHT MICROSCOPY (PLM)

Project: Project No. 6439.01 Al - Bldg.2-6105

SAMPLE L		APPEARANCE	SAMPLE TREATMENT	ASBE	ASBESTOS		<u>NONASB</u>	<u>ESTOS</u>	STOS	
	LOCATION			%	TYPE	%	FIBROUS	%	NONFIBROUS	
0101		Grey	Teased	Nor	ne Detected			100%	6 Other	
		Non-Fibrous								
		Homogeneous								
0102 ·		Grey	Teased	Noi	ne Detected			100%	6 Other	
		Non-Fibrous	10000							
		Homogeneous								
0103		Grey	Teased	No	ne Detected			100%	6 Other	
		Non-Fibrous	, 00000							
		Homogeneous								
0204		Grey/Black	Dissolved/Teased	No	ne Detected	60%	Cellulose	40%	6 Other	
		Fibrous Heterogeneous								
0205		Grey/Black	Dissolved/Teased	No	ne Detected	60%	Cellulose	40°	6 Other	
		Fibrous								
		Heterogeneous								
0206		Grey/Black	Dissolved/Teased	No	ne Detected	60%	Cellulose	40'	% Other	
	i	Fibrous								
•	i i i i	Heterogeneous			(8 :					

Comments: For all obviously heterogeneous samples easily separated into subsamples, and for layered samples, each component is analyzed separately. Also, "# of Layers" refers to number of separable subsamples.

Tom Ferrante
Analyst

Approved Signatory



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